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ABSTRACT

This resource presents the functional effects of chronic disabilities in order to aid those persons who must plan environments usable by persons with disabilities. The guide does not concern architectural accessibility per se, but rather discusses designing the worksite to be usable by a disabled person. In the guide, drawings are provided for office (worksite 1) and factory (worksite 2) settings for each of the following disabilities: difficulty in interpreting information; limitation of sight; limitation of hearing; limitation of speech; susceptibility to fainting, dizziness, and seizures; incoordination; limitation of stamina; difficulty in moving head; limitation of sensation; difficulty in lifting and reaching with arms; difficulty in handling and fingering; inability to use upper extremities; difficulty in sitting; difficulty in using lower extremities; and poor balance. Guidelines are given for making the worksite usable by persons with each of these limitations. The guide also includes a bibliography and a list of suppliers of products mentioned in the guide. (KC)

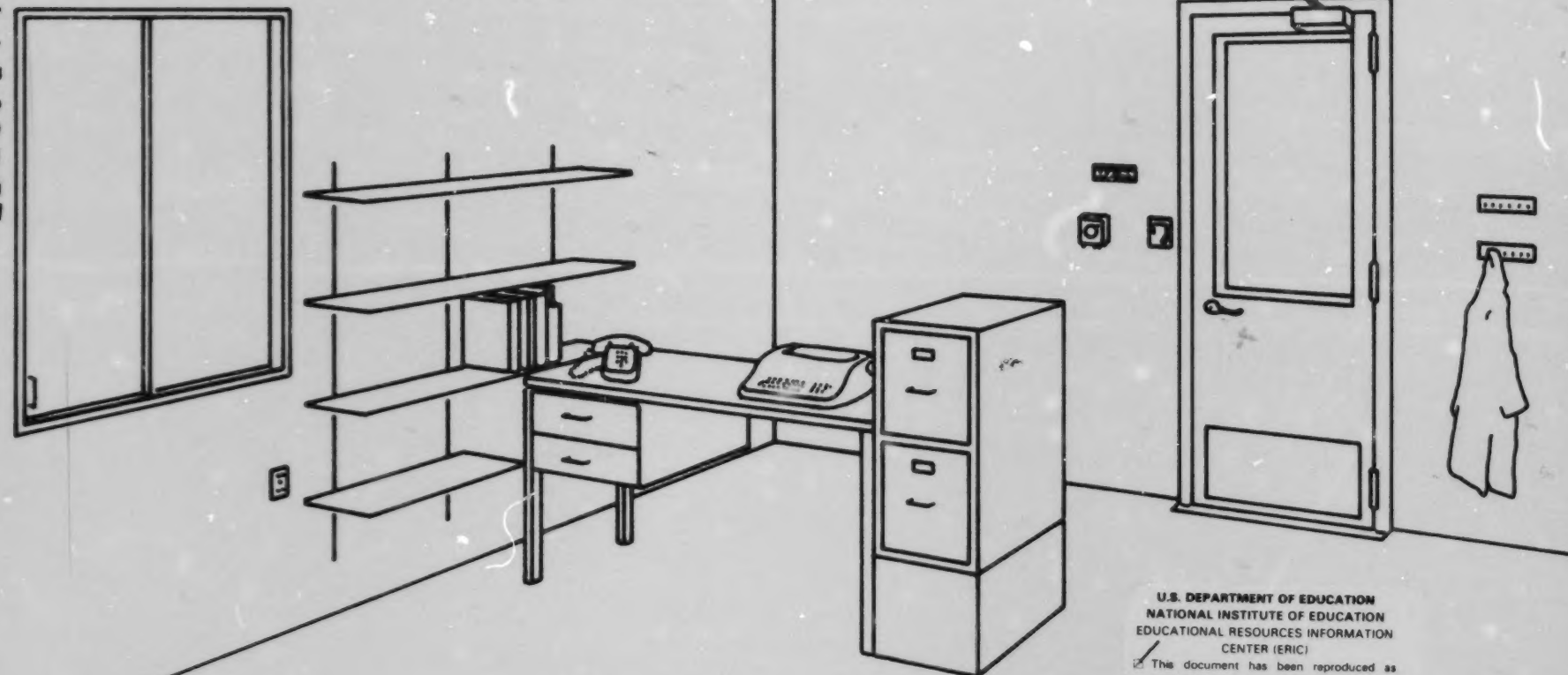
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THE WORKSITE

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DESIGNING FOR FUNCTIONAL LIMITATIONS

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THE JOB DEVELOPMENT LABORATORY THE GEORGE WASHINGTON UNIVERSITY REHABILITATION RESEARCH AND TRAINING CENTER

CE041985

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Many individuals of diverse backgrounds have contributed invaluable personal knowledge and insight to the development of this resource. They have demonstrated their commitment to the independence of disabled persons by offering their time and expertise. The ultimate usefulness of this resource owes much to their efforts.

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INTRODUCTION

This resource is a presentation of the functional effects of chronic disabilities. Knowledge of these effects is essential in planning environments usable by persons with disabilities.

This resource does not concern architectural accessibility per se. Many excellent publications are available on this subject; some are listed in the Bibliography. Designing for Functional Limitations deals instead with "usability". An accessible building in which a disabled person cannot function independently is as much a barrier as an inaccessible building. Few resources offer information on how to maximize the abilities of the disabled person beyond accessibility in the work environment.

The illustrations which follow, and the accompanying text, have been designed to help in planning functional environments most sensitive to the abilities and limitations of disabled persons. WORKSITE 1 and WORKSITE 2 illustrations may appear to be common work environments. They are: WORKSITE 1 is an office-type setting, and WORKSITE 2 is a more industrial setting. Added to these illustrations are guidelines for worksite design which can aid not only a large percentage of disabled employees, but also non-disabled employees. As some worksites may be a combination of an office and industrial setting, it is recommended that both Worksite 1 and Worksite 2 guidelines be used to plan modifications to a specific site. Guidelines noted on pages 5 and 7 have been compiled from resources listed on the reverse side of each page.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

SLIDING WINDOWS PREFERRED



WINDOW CONTROLS
20-54" (508-1372mm)
MAX. OPERATING FORCE
5 LB (22.2 N)

18-48"
(457-1219mm)

23.5-35"
(596-889mm)

9-12" (227-305mm)
MAX. SHELF HEIGHT
63" (1600mm)

LOCATE BULKIEST OBJECTS
ON LEVEL WITH DESK

16.5" MIN.
(419mm)

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN.

29-38"
(737-965mm)

WORK STATION

AVOID CENTER DRAWERS
24" (610mm) MIN. KNEE WELL WIDTH
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH SYMBOL

LETTERING

LIGHT-ON-DARK PREFERRED
0.625-1" (16-25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT 54-66" (1372-1676mm)

DIAL THERMOSTAT

ROCKER
SWITCH

36-48"
(914-1219mm)

36-42"
(914-1067mm)

ROUNDED LEVER

32-36"
(813-914mm)

KICKPLATE 12-18"
(305-457mm)

44" MAX.
(1118mm)

60" (1524mm)

DOORS

CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE-HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLASHING VISUAL ALARM (less than 5 Hz)
8000 Hz AUDITORY ALARM (120 db max.)

EMERGENCY

DOOR CLOSER RESISTANCE

5-15 LB (22.2-66.7 N)
pref. adjustable
or automatic

42-48"
(1067-1219mm)

STORAGE CABINETS

DRAWERS WITH ROLLERS FOR EASY OPERATION
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
DRAWERS SHOULD BE OPERABLE WITH ONE HAND

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
CONSIDERATIONS FOR MORE SPECIFIC FUNCTIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

WORKSITE 1

Specifications on the reverse side are based on body measurements of the "average adult." Extremes of size and weight may require adjustment of some specifications. Further explanations of these guidelines may be found in the following resources, from which all specifications have been compiled:

CABINETS, DRAWERS, FILES

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3a, 3b
 Goldsmith, Designing for the Disabled, 245-251, 315
 Mace, An Illustrated Handbook of the North Carolina State Building Code, 117
 Steinfeld, Barrier-Free Design for the Elderly and Disabled, 111

CLOTHES HOOKS

Goldsmith, Designing for the Disabled, 314
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 115
 Veterans Administration, Handbook for Design: Specially Adapted Housing, 43

DOORS AND HARDWARE

Cary, How to Create Interiors for the Disabled, 24-31
 Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 26, 30
 Duncan, Gish, Mulholland, Townsend, Environmental Modifications for the Visually Impaired: A Handbook, 444
 Goldsmith, Designing for the Disabled, 185-190
 Harkness, Groom, Building Without Barriers for the Disabled, 31-32
 Mace, An Illustrated Handbook of the North Carolina State Building Code, 34, 35, 39, 40; and Accessibility Modifications, 21-25
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 117, 77-80
 Steinfeld, Barrier-Free Design for the Elderly and Disabled, 100-103, 76
 Veterans Administration, Handbook for Design: Specially Adapted Housing, 34-37

ELECTRICAL OUTLETS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3b
 Goldsmith, Designing for the Disabled, 212-213
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 110, 118
 Veterans Administration, Handbook for Design: Specially Adapted Housing, 41

EQUIPMENT CONTROLS

Bazar, Ergonomics in Rehabilitation Engineering, 55-71
 Steinfeld, Barrier-Free Design for the Elderly and the Disabled, 111

FIRE ALARMS/EXTINGUISHERS

Harkness, Groom, Building Without Barriers for the Disabled, 16, 18
 Mace, An Illustrated Handbook of the North Carolina State Building Code, 85
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 112, 125
 Steinfeld, Barrier-Free Design for the Elderly and the Disabled, 72

FLOORS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 26
 Duncan, Gish, Mulholland, Townsend, Environmental Modifications for the Visually Impaired: A Handbook, 444-445
 Goldsmith, Designing for the Disabled, 196-197
 Harkness, Groom, Building Without Barriers for the Disabled, 16, 34
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 75

INTERIOR SIGNS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 28, 29, 3b
 Duncan, Gish, Mulholland, Townsend, Environmental Modifications for the Visually Impaired: A Handbook, 444-447
 Harkness, Groom, Building Without Barriers for the Disabled, 16-18
 Mace, An Illustrated Handbook of the North Carolina State Building Code, 84-85
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 112-113

SHELVES

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3a, 3b
 Goldsmith, Designing for the Disabled, 173-126
 Mace, An Illustrated Handbook of the North Carolina State Building Code, 117
 National Academy of Science, Accessibility: An Approach to the Development of Design Criteria, C12-C15
 Veterans Administration, Handbook for Design: Specially Adapted Housing, 43

TABLES, DESKS, WORK STATIONS

Austin, Resources Handbook for Barrier-Free Design, 79
 Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3a, 3b
 Grandjean, Fitting the Task to the Man
 Harkness, Groom, Building Without Barriers for the Disabled, 36
 Mace, An Illustrated Handbook of the North Carolina State Building Code, 92-93
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 115
 Trombly, Scott, Occupational Therapy for Physical Dysfunction, 391-392

TELEPHONES

Cary, How to Create Interiors for the Disabled, 110
 Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 26, 3a
 Goldsmith, Designing for the Disabled, 214
 Mace, An Illustrated Handbook of the North Carolina State Building Code, 114-115
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 109, 125
 Veterans Administration, Handbook for Design: Specially Adapted Housing, 41

THERMOSTAT

Mace, An Illustrated Handbook of the North Carolina State Building Code, 84-85
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 111

WALLS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 2b
 Harkness, Groom, Building Without Barriers for the Disabled, 16

WALL SWITCHES

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3b
 Goldsmith, Designing for the Disabled, 211
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 111
 U.S. Department of Housing and Urban Development, Barrier-Free Site Design, 17
 Veterans Administration, Handbook for Design: Specially Adapted Housing, 40

WINDOWS AND CONTROLS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3a
 Goldsmith, Designing for the Disabled, 178-180
 Ohio Governor's Committee on Employment of the Handicapped, Access for All, 111, 124
 Steinfeld, Barrier-Free Design for the Elderly and the Disabled, 106-107
 Veterans Administration, Handbook for Design: Specially Adapted Housing, 38

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

STORAGE CABINETS

CABINET HEIGHT 63" MAX. (1600mm)
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

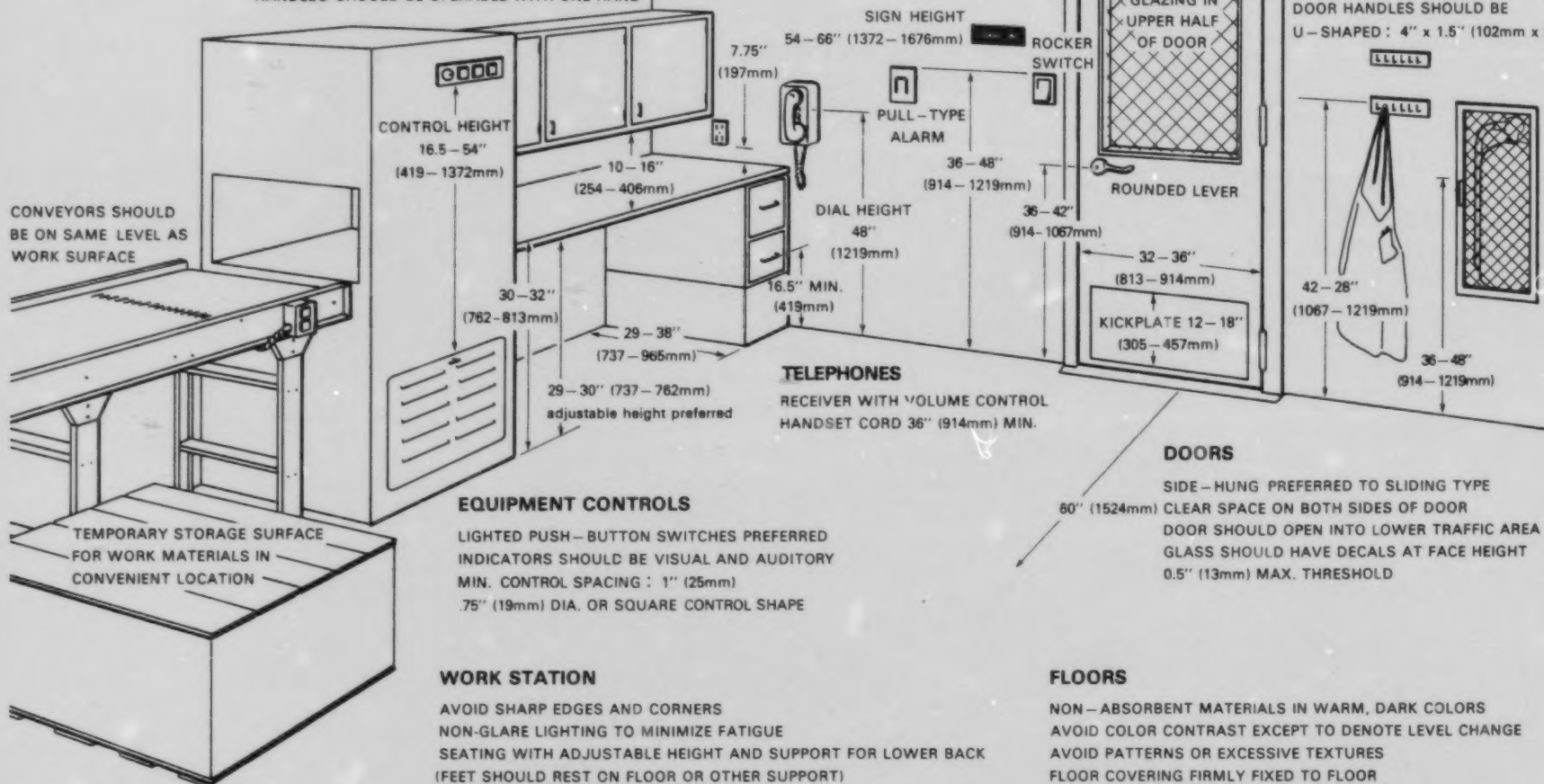
LIGHT-ON-DARK PREFERRED
0.625-1" (16-25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE

FLASHING VISUAL ALARM (less than 5 Hz)
8000 Hz AUDITORY ALARM (120 db max.)

EMERGENCY

DOOR CLOSER RESISTANCE
5-15 LB (22.2-66.7N)
pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED,
DOOR HANDLES SHOULD BE
U-SHAPED: 4" x 1.5" (102mm x 38mm)



SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS. CONSIDERATIONS FOR MORE SPECIFIC FUNCTIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

WORKSITE 2

Specifications on the reverse side are based on body measurements of the "average adult." Extremes of size and weight may require adjustment of some specifications. Further explanations of these guidelines may be found in the following resources, from which all specifications have been compiled:

CABINETS, DRAWERS, FILES

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3a, 3b
Goldsmith, Designing for the Disabled, 245-251, 315
Mace, An Illustrated Handbook of the North Carolina State Building Code, 117
Steinfeld, Barrier-Free Design for the Elderly and Disabled, 111

CLOTHES HOOKS

Goldsmith, Designing for the Disabled, 314
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 115
Veterans Administration, Handbook for Design: Specially Adapted Housing, 43

DOORS AND HARDWARE

Cary, How to Create Interiors for the Disabled, 24-31
Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 26, 30
Duncan, Gish, Mulholland, Townsend, Environmental Modifications for the Visually Impaired: A Handbook, 444
Goldsmith, Designing for the Disabled, 185-190
Harkness, Groom, Building Without Barriers for the Disabled, 31-33
Mace, An Illustrated Handbook of the North Carolina State Building Code, 34, 35, 39, 40; and Accessibility Modifications, 21-25
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 117, 77-80
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Veterans Administration, Handbook for Design: Specially Adapted Housing, 34-37

ELECTRICAL OUTLETS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3b
Goldsmith, Designing for the Disabled, 212-213
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 110, 118
Veterans Administration, Handbook for Design: Specially Adapted Housing, 41

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Mace, An Illustrated Handbook of the North Carolina State Building Code, 85
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 112, 125
Steinfeld, Barrier-Free Design for the Elderly and the Disabled, 72

FLOORS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 26
Duncan, Gish, Mulholland, Townsend, Environmental Modifications for the Visually Impaired: A Handbook, 444-445
Goldsmith, Designing for the Disabled, 196-197
Harkness, Groom, Building Without Barriers for the Disabled, 16, 34
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 75

INTERIOR SIGNS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 28, 29, 3b
Duncan, Gish, Mulholland, Townsend, Environmental Modifications for the Visually Impaired: A Handbook, 444-447
Harkness, Groom, Building Without Barriers for the Disabled, 16-18
Mace, An Illustrated Handbook of the North Carolina State Building Code, 84-85
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 112-113

SHELVES

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3a, 3b
Goldsmith, Designing for the Disabled, 123-126
Mace, An Illustrated Handbook of the North Carolina State Building Code, 117
National Academy of Science, Accessibility: An Approach to the Development of Design Criteria, C12-C15
Veterans Administration, Handbook for Design: Specially Adapted Housing, 43

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Grandjean, Fitting the Task to the Man
Harkness, Groom, Building Without Barriers for the Disabled, 36
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Ohio Governor's Committee on Employment of the Handicapped, Access for All, 115
Trombly, Scott, Occupational Therapy for Physical Dysfunction, 391-392

TELEPHONES

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Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 26, 3a
Goldsmith, Designing for the Disabled, 214
Mace, An Illustrated Handbook of the North Carolina State Building Code, 114-115
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 109, 125
Veterans Administration, Handbook for Design: Specially Adapted Housing, 41

THERMOSTAT

Mace, An Illustrated Handbook of the North Carolina State Building Code, 84-85
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 111

WALLS

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 26
Harkness, Groom, Building Without Barriers for the Disabled, 16

WALL SWITCHES

Diffrient, Tilley, Bardagjy, Humanscale 1/2/3, 3b
Goldsmith, Designing for the Disabled, 211
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 111
U.S. Department of Housing and Urban Development, Barrier-Free Site Design, 17
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Goldsmith, Designing for the Disabled, 178-180
Ohio Governor's Committee on Employment of the Handicapped, Access for All, 111, 124
Steinfeld, Barrier-Free Design for the Elderly and the Disabled, 106
Veterans Administration, Handbook for Design: Specially Adapted Housing, 38

HOW TO USE THIS RESOURCE

The following is an example of how DESIGNING FOR FUNCTIONAL LIMITATIONS can be used.

Paul has applied for the job of information receptionist at a large government office. He has a high school diploma and some college experience. Paul has cerebral palsy. He is qualified for the job, but he and his prospective employer feel that some modifications to the worksite may help. The job requires access to a large directory of employees which must be accessed quickly for visitors seeking a specific office or telephone number. There is considerable use of the telephone involved, and verbal assistance must occasionally be given to visitors.

Paul and his prospective employer have reviewed WORKSITE 1 and 2 illustrations on pages 5 and 7 to check for any major barriers in the general work environment. It is noted that the most serious barriers have already been removed, but door knobs will have to be replaced with levers.

They then reviewed further modifications as illustrated for functional limitations on pages 13 through 74. On the reverse side of each illustration are listed any disabilities which may require the modifications printed in dark over the WORKSITE illustration. Although Paul has cerebral palsy, he has no difficulty in interpreting information, no limitation of speech, no incoordination, or difficulty in moving his head; therefore, these modifications were not considered. His functional limitations which may affect job performance include poor balance, difficulty in using lower extremities, and difficulty in handling and fingering. The illustrations for these limitations (pp. 41, 39, 33, 73, 71, 65) suggested modifications which could help Paul be more independent at work.

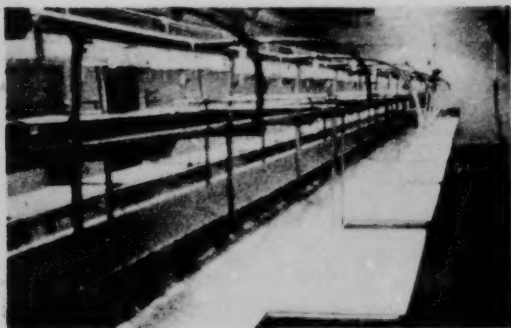
Handle assists can be placed at the desk to aid him in sitting down and rising from the chair. The stool at the worksite can be replaced with one having full arms and a backrest. Quick access to the office directory is done with the aid of a microfilm viewer and a microfilm version of the directory. The viewer controls can be converted to push-button operation. A headset receiver will make use of the telephone easier. Paul and his employer agree that these modifications will be useful and cost-effective for this job/client match. In this situation, WORKSITE 1 was used. However, had the job required it, WORKSITE 2 illustrations might also have been helpful.

Counselors and evaluators will find DESIGNING FOR FUNCTIONAL LIMITATIONS helpful in job planning with their clients. Employers can use it in planning affirmative action programs. Designers and engineers, as well as students of these professions, can use it to plan environments and products more suitable for use by able and disabled consumers alike. DESIGNING FOR FUNCTIONAL LIMITATIONS is a workbook, not a textbook. It is offered in looseleaf format to encourage additions, notes, and convenient use. Your comments on its usefulness to you are welcome.

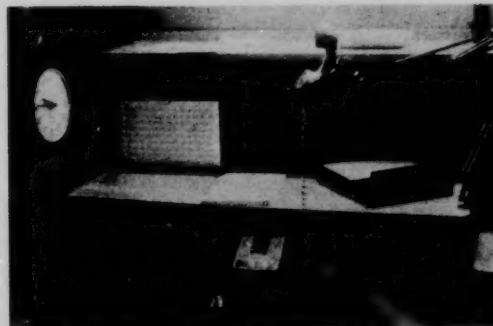
Guidelines presented in this resource should be freely adapted to the requirements of the worker and the worksite. Pictured below are actual worksites modified for disabled workers. In each case, the ideas of the worker, the employer, and the counselor were integrated to develop a more productive setting for disabled and non-disabled workers.

Photos by Innovative Services Unit,
Vocational Rehabilitation Division,
Portland, Oregon

Photos by Job Development Laboratory
The George Washington University
Washington, D.C.



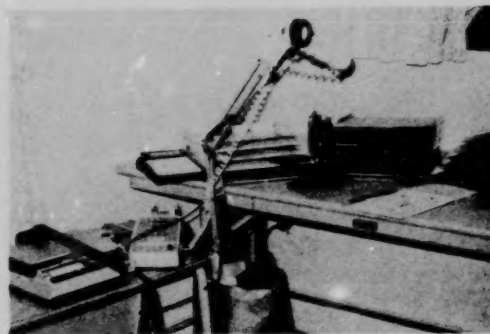
Preparation line at fish processing plant modified for reach-impaired person.



Telephone survey clerk desk modified for worker with muscular dystrophy.



Dental technician site modified for worker with spinal cord injury.



Home worksite for insurance claims adjuster with spinal cord injury.

MODIFICATIONS TO WORKSITE 1

11

20

THE FUNCTIONAL LIMITATIONS

All disabilities, regardless of severity, can be functionally described as some combination of the following limitations:

- Difficulty in interpreting information p. 13
- Limitation of sight p. 15
- Limitation of hearing p. 17
- Limitation of speech p. 19
- Susceptibility to fainting, dizziness, seizures p. 21
- Incoordination p. 23
- Limitation of stamina p. 25
- Difficulty in moving head p. 27
- Limitation of sensation p. 29
- Difficulty in lifting and reaching with arms p. 31
- Difficulty in handling and fingering p. 33
- Inability to use upper extremities p. 35
- Difficulty in sitting p. 37
- Difficulty in using lower extremities p. 39
- Poor balance p. 41

In the following pages, the WORKSITE illustration is presented with additional guidelines for each of the above limitations.

This resource is intended to be used as a framework for planning the environment in cooperation with the disabled person, who knows his or her abilities best. Design suggestions for each limitation should be examined and evaluated with the specific environment and individual in mind. Use this resource as a guide to planning modifications for everyone concerned, and the result will be a more productive environment for disabled and non-disabled as well.

WALLS

USE LIGHT-BRIGHTER MATERIALS FOR SIGNAGE.
AVOID SHARP EDGES AND POINTS ON OBJECTS.
THICK WALLS ARE NOT RECOMMENDED.

INTERIOR SIGNS

LOCATE SIGNS CLOSE TO REFERRED ITEM.
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.

**LOCATE LABELS, INSTRUCTIONS CLOSE TO REFERRED ITEM
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS**

LOCATE SIGNS CLOSE TO REFERRED ITEM.
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.
THICK WALLS ARE NOT RECOMMENDED.

LOCATE SIGNS CLOSE TO REFERRED ITEM.
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.

LOCATE SIGNS CLOSE TO REFERRED ITEM.
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.

LOCATE SIGNS CLOSE TO REFERRED ITEM.
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.

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USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.

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USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.

LOCATE SIGNS CLOSE TO REFERRED ITEM.
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.

LOCATE SIGNS CLOSE TO REFERRED ITEM.
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LOCATE SIGNS CLOSE TO REFERRED ITEM.
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS.

EMERGENCY

DOOR CLOSING DISTANCE
1000-1200mm (39-47in)

DOOR CLOSING DISTANCE
1000-1200mm (39-47in)

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1000-1200mm (39-47in)

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1000-1200mm (39-47in)

DOOR CLOSING DISTANCE
1000-1200mm (39-47in)



WINDOW CONTROLS:
20-24 IN (508-609mm)
MAX OPERATING FORCE:
8.18 (23.1N)

18-24 IN (457-609mm)

23.5 IN (597mm)

20-24 IN (508-609mm)
MAX SHELF HEIGHT
32 IN (813mm)

20-24 IN (508-609mm)
MAX SHELF HEIGHT
32 IN (813mm)

20-24 IN (508-609mm)
MAX SHELF HEIGHT
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20-24 IN (508-609mm)
MAX SHELF HEIGHT
32 IN (813mm)

20-24 IN (508-609mm)
MAX SHELF HEIGHT
32 IN (813mm)

TELEPHONES

PHONE SH WITH VOLUME CONTROL
HANDS-FREE 20-24 IN (508-609mm)

PHONE SH WITH VOLUME CONTROL
HANDS-FREE 20-24 IN (508-609mm)

PHONE SH WITH VOLUME CONTROL
HANDS-FREE 20-24 IN (508-609mm)

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PHONE SH WITH VOLUME CONTROL
HANDS-FREE 20-24 IN (508-609mm)

PHONE SH WITH VOLUME CONTROL
HANDS-FREE 20-24 IN (508-609mm)

WORK STATION

AVOID CENTER DRAWERS
24 IN (609mm) MIN KNEE WELL WIDTH
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

**DEFINE WORK ROUTINE AND TASK SEQUENCE CLEARLY
MINIMIZE NOISE, CLUTTER, AND OTHER DISTRACTIONS
ARRANGE MATERIALS IN ORDER OF USE**

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
FEET SHOULD REST ON FLOOR OR OTHER SUPPORT

STORAGE CABINETS

WITH ROLLERS FOR EASY OPERATION
HANDLES: 3" x 1.5" (76mm x 38mm)
DRAWERS SHOULD BE OPERABLE WITH ONE HAND

DOORS

80 IN (2032mm) CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE REINFORCEMENT AT FACE HEIGHT
60 IN (1524mm) MAX THRESHOLD

FLOORS

USE "DESCRIBED" MATERIALS IN WARM, DARK COLORS
AVOID SHARP CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID POLISHED TEXTURES OR CHANGES IN DIRECTION OF GRAB
THIS HELPS - BUT - UNWIDDED LOOP PILE CARPETING IS PREFERRED
CARPETING SHOULD BE FIRMLY FIXED TO FLOOR

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
DIFFICULTY IN INTERPRETING INFORMATION
AFFECTS APPROX. 7% OF U.S. POPULATION

WORKSITE 1

DIFFICULTY IN INTERPRETING INFORMATION

Persons with this limitation have limited understanding of spoken or written information. Approximately 7% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Cerebral Palsy
Cerebrovascular Accidents (Stroke)
Mental Retardation

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.



**BOOKSTAND OR VIDEO READING AID
FOR EASIER READING**



**ENLARGED "TOUCHTONE" BUTTONS
AUDIBLE INDICATOR FOR MULTIPLE PHONE LINES**

**ILLUMINATE SIGNS WELL
USE SIMPLE WORDS, SYMBOLS AND/OR NUMBERS**

EMERGENCY

**ROUGH-TEXTURED LEVERS INDICATE
EMERGENCY EXIT ONLY**

**DOORS TO HAZARDOUS AREAS
SHOULD BE KEPT LOCKED**



**2" x 1/8" (50 x 3mm) APPLIED STRIPS WITH 1/2" (13mm) SPACING
OR
1/8" (3mm) GROOVES IN SURFACE WITH 2" (50mm) SPACING**

WORK STATION

**AVOID CONSTANT RELOCATION OF MATERIALS
USE BLACK FELT-TIP PENS FOR MAXIMUM LEGIBILITY
OR SENSORY PEN FOR WRITING OR DRAWING RAISED LINES
"TALKING" CALCULATOR FOR AUDIBLE COMPUTATION**

FLOORS

**MINIMIZE NOISE FOR BETTER COMMUNICATION
CONTRAST FURNITURE, DOORWAYS, ETC. WITH SURROUNDINGS BY COLOR AND BRIGHTNESS
MINIMIZE CLUTTER; DO NOT REMOVE ALL "LANDMARKS" (FURNITURE, PARTITIONS) FOR NAVIGATION**

LIMITATION OF SIGHT

AFFECTS LESS THAN 1% OF U.S. POPULATION

WORKSITE 1

LIMITATION OF SIGHT

Persons with this limitation include those who cannot read newspaper-sized print, are legally blind (20/200), have vision field defect of 10% or less, or have hemianopsia (one-sided vision). Less than 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Arthritis (Steroid Implications)	Trauma
Cancer	Tunnel Vision
Cataracts	
Cerebral Palsy	
Cerebrovascular Accidents (Hemianopsia)	
Congenital or Traumatic Blindness	
Diabetes Retinopathy	
Glaucoma	
Retina Degeneration	

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BOOK STANDS
 BRAILLE COMMUNICATION SYSTEMS
 ILLUMINATED MAGNIFIERS
 LEVER DOOR HANDLES
 SENSORY PENS
 "TALKING" CALCULATOR
 TELEPHONE AIDS
 VIDEO READING AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

SLIDING WINDOWS PREFERRED



WINDOW CONTROLS
20-54" (508-1372mm)
MAX. OPERATING FORCE
5 LB (22.3 N)



LOCATE BULKIEST OBJECTS
ON LEVEL WITH DESK

MAX. SHELF HEIGHT
63" (1600mm)

TELEPHONE AIDS:
TELETYPE (TTY)
VISUAL CALL CUE
BONE CONDUCTION RECEIVER

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN.



29-38"
(737-965mm)

16.5" MIN.
(419mm)

29-30"
(737-762mm)

30-32"
(762-813mm)

16.5" MIN.
(419mm)

WORK STATION

AVOID CENTER DRAWERS
24" (610mm) MIN. KNEE WELL WIDTH
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

**FACE WORKSTATION TOWARD CO-WORKERS
AND OFFICE TRAFFIC FOR FACE-TO-FACE COMMUNICATION**

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

LIGHT ON DARK PREFERRED
0.625-1" (16-25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT 54-66" (1372-1676mm)

DIAL THERMOSTAT



36-48"
(914-1219mm)

36-42"
(914-1067mm)

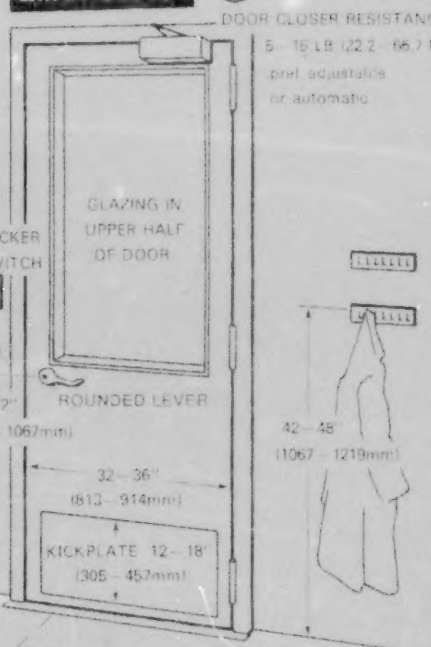
ROCKER SWITCH



36-48"
(914-1219mm)

36-42"
(914-1067mm)

EMERGENCY



DOORS

60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE-HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD
**VISUAL INDICATOR IF WORKER MUST
ANSWER DOOR**

STORAGE CABINETS

DRAWERS WITH ROLLERS FOR EASY OPERATION
4" x 1.5" (102mm x 38mm)
DRAWERS SHOULD BE OPERABLE WITH ONE HAND

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID SCULPTURED TEXTURES OR CHANGES IN DIRECTION OF GRAIN
THIN, HEAVY-DUTY UNPADDED LOOP PILE CARPETING PREFERRED
CARPETING SHOULD BE FIRMLY FIXED TO FLOOR

CLEAR WRITTEN INSTRUCTIONS TO MINIMIZE NEED FOR VERBAL ASSISTANCE

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

LIMITATION OF HEARING

AFFECTS APPROX. 3% OF U.S. POPULATION

ADDITIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

WORKSITE 1

LIMITATION OF HEARING

Persons with this limitation cannot understand usable speech with or without amplification. Approximately 3% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Agensis of the Pinna
- Brain Damage
- Cancer
- Complications of Other Diseases
- Congenital or Traumatic Loss
- Otosclerosis

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- TELEPHONE AIDS
- TELEPHONE AIDS FOR NON-VERBAL PERSONS (TTY)

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

MINIMIZE NOISE FOR BETTER COMMUNICATION

INTERIOR SIGNS

LETTERING

EMERGENCY

TELEPHONES

**TELETYPE (TTY) FOR NON-VERBAL
TELEPHONE COMMUNICATION**

**SPEECH COMPRESSOR/RECORDER FOR CLEARER RECORDED SPEECH
COMMUNICATOR OR SPEECH SYNTHESIZER AVAILABLE FOR NON-VERBAL PERSONS**

WORK STATION

**FACE WORKSTATION TOWARD CO-WORKERS
AND OFFICE TRAFFIC FOR FACE-TO-FACE COMMUNICATION**

SEATING

ADJUSTABLE HEIGHT AND FURNISH FOR LOWER BACK
FEET SHOULD REST ON FLOOR OR OTHER SUPPORT

STORAGE CABINETS

DRAWERS WITH ROLLERS FOR EASY OPERATION
DRAWERS SHOULD BE LOCKED WHEN NOT IN USE

DOORS

DOOR SHOULD HAVE DECALS AT FACE HEIGHT
DOOR SHOULD BE LOCKED WHEN NOT IN USE

FLOORS

WORK STATION SHOULD BE ADJUSTABLE TO SUIT PERSON'S HEIGHT
WORK STATION SHOULD BE ADJUSTABLE TO SUIT PERSON'S REACH
WORK STATION SHOULD BE ADJUSTABLE TO SUIT PERSON'S WEIGHT

CLEAR WRITTEN INSTRUCTIONS TO MINIMIZE NEED FOR VERBAL ASSISTANCE

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH

LIMITATION OF SPEECH

AFFECTS APPROX. 4% OF U.S. POPULATION

WORKSITE 1

LIMITATION OF SPEECH

Persons with this limitation have slow and/or indistinct speech, or use non-verbal communication. Approximately 4% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Brain Damage
- Cancer
- Cerebral Palsy
- Cerebrovascular Accidents (Stroke)
- Hearing Disorders

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- SPEECH COMPRESSOR/RECORDERS
- SPEECH SYNTHESIZERS, COMMUNICATORS
- TELEPHONE AIDS FOR NON-VERBAL PERSONS (TTY)

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

SIMPLE WINDOWS PREFERRED



WINDOW CONTROLS
20-64" (508-1372mm)
MAX. OPERATING FORCE
5 LB (22.2 N)



TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN.

**BAR OR HANDLE ASSISTS
FIRMLY ANCHORED WHEREVER
ADDED SUPPORT IS NEEDED**

WORK STATION

AVOID CENTER DRAWERS
24" (610mm) MIN. KNEE WELL WIDTH
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

**AVOID SECLUDED WORKSTATIONS
AVOID NEED FOR BENDING DOWN TO REACH OR LIFT**

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FLOOR OR OTHER SUPPORT)

SUDDEN NOISES OR FLASHING LIGHTS MAY BRING ON SEIZURES

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LARGE USABLE FACILITIES WITH PICTORIAL SYMBOLS

LETTERING

LIGHT-ON-DARK PREFERRED
0.625-1" (16-25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT 54-66" (1372-1675mm)

DIAL THERMOSTAT

ROCKER SWITCH

EMERGENCY

DOOR CLOSER RESISTANCE

5-15 LB (22.2-66.7 N)
pref. adjustable
or automatic

GLAZING IN
UPPER HALF
OF DOOR

ROUNDED LEVER

32-38"
(813-914mm)

KICKPLATE 12-18"
(305-457mm)

DOORS

60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE-HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

STORAGE CABINETS

DRAWERS WITH ROLLERS FOR EASY OPERATION
DRAWERS WITH APPLIED HANDLES: 4" x 1.5" (102mm x 38mm)
DRAWERS SHOULD BE OPERABLE WITH ONE HAND

WHEELED CART OR OTHER AID FOR CARRYING MATERIALS

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID SCULPTURED TEXTURES OR CHANGES IN DIRECTION OF GRAIN
THIN, HEAVY-DUTY UNPADDED LOOP PILE CARPETING PREFERRED
CARPETING SHOULD BE FIRMLY FIXED TO FLOOR

LEVEL OF PHYSICAL EXERTION SHOULD NOT VARY GREATLY FROM DAY TO DAY (FLOOR OR OTHER SUPPORT)

NOTE: IF THIS LIMITATION CANNOT BE CONTROLLED BY MEDICATION, AVOID TASKS IN WHICH THIS LIMITATION MIGHT JEOPARDIZE THE SAFETY OF OTHERS

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH

WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

SUSCEPTIBILITY TO FAINTING, DIZZINESS, SEIZURES

AFFECTS APPROX. 2% OF U.S. POPULATION

WORKSITE 1

SUSCEPTIBILITY TO FAINTING, DIZZINESS, SEIZURES

Persons with this limitation experience inducible or spontaneous fainting, dizziness, and/or seizures. Approximately 2% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Cardiac Conditions
- Cerebral Palsy
- Epilepsy

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- BAR OR HANDLE ASSISTS
- WHEELED CARTS, SHOULDER BAGS, CARRYING AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE FLAT, UNDECORATED, NON-GLASS SURFACES
REDUCE GLARE AND CONTRAST WITH SURROUNDING AREAS
AVOID TEXTURE, PATTERN, OR COLOR

INTERIOR SIGNS

USE HIGH-CONTRAST, EASY-TO-READ, LARGE, UNDECORATED, NON-GLASS SURFACES
AVOID TEXTURE, PATTERN, OR COLOR

LETTERING

USE HIGH-CONTRAST, EASY-TO-READ, LARGE, UNDECORATED, NON-GLASS SURFACES
REDUCE GLARE AND CONTRAST WITH SURROUNDING AREAS
AVOID TEXTURE, PATTERN, OR COLOR

EMERGENCY



USE HIGH-CONTRAST, EASY-TO-READ, LARGE, UNDECORATED, NON-GLASS SURFACES
REDUCE GLARE AND CONTRAST WITH SURROUNDING AREAS
AVOID TEXTURE, PATTERN, OR COLOR

**EASIER DOCUMENT ACCESS
USING BOOKSTAND,
MICROFILM VIEWER,
OR READING MACHINE
(SEE "CONTROLS" AT RIGHT)**

**TELEPHONE AIDS:
SPEAKERPHONE
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER
ENLARGED "TOUCHTONE" BUTTONS**

**CONTROLS SHOULD BE LARGE AND WELL-SPACED
AVOID FINE CONTROL ADJUSTMENTS**

**BAR OR HANDLE ASSISTS
FIRMLY ANCHORED WHEREVER
ADDED STABILITY IS NEEDED**

**ELECTRIC, SELF-CORRECTING,
AUTO-RETURN TYPEWRITER
WITH KEYGUARD TO INCREASE
ACCURACY AND STABILITY
AND PAPER ROLL**

**CASSETTE TAPE RECORDER FOR
MESSAGES, MEMOS, DICTATION, ETC.**

WORK STATION

AVOID CLUTTERED DESKTOPS
USE 20" DEEP WORK SURFACES WITH
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE EYE STRAIN

STORAGE CABINETS

**LIP AROUND EDGE OF WORK SURFACE TO KEEP MATERIALS FROM FALLING
KEEP WORK SURFACE AS CLEAR AS POSSIBLE
TOOLS AND MATERIALS SHOULD BE HEAVY AND DURABLE
MINIMIZE NEED FOR LONG REACH, STRETCHING UP, BENDING DOWN
USE BOLTS, CLAMPS, OR NON-SLIP MATS TO STABILIZE MATERIALS**

DOORS

USE SPACE ON BOTH SIDES OF DOOR
SIDE HANDLE DISTANT TO SLAMMING
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DETAILS AT EYE HEIGHT
USE TRIMMED MAT THRESHOLD

FLOORS

USE UNDECORATED MAT WITH NO MARKS OR DARK COLORS
AVOID CONTRAST WITH SURROUNDING AREAS
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE EYE STRAIN

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
INCOORDINATION FUNCTIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

AFFECTS APPROX. 1% OF U.S. POPULATION

INCOORDINATION

Persons with this limitation experience lack of control in placing or directing their extremities (spasticity). Approximately 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Ataxia
Cerebral Palsy
Cerebrovascular Accidents
Hemiplegia
Multiple Sclerosis
Parkinson's Disease

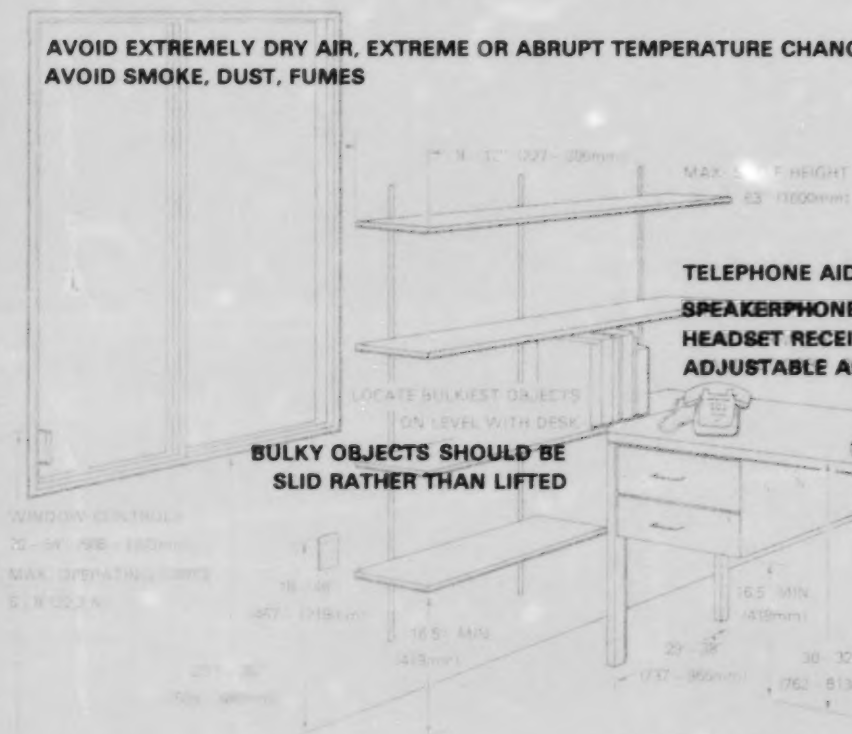
Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BAR OR HANDLE ASSISTS
BOOKSTANDS
CASSETTE TAPE RECORDERS
MICROFILM VIEWERS
NON-SLIP MATS

READING MACHINES
TELEPHONE AIDS
TYPEWRITERS
TYPEWRITER KEYGUARDS, PAPER ROLLS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

AVOID EXTREMELY DRY AIR, EXTREME OR ABRUPT TEMPERATURE CHANGE
AVOID SMOKE, DUST, FUMES



INTERIOR SIGNS

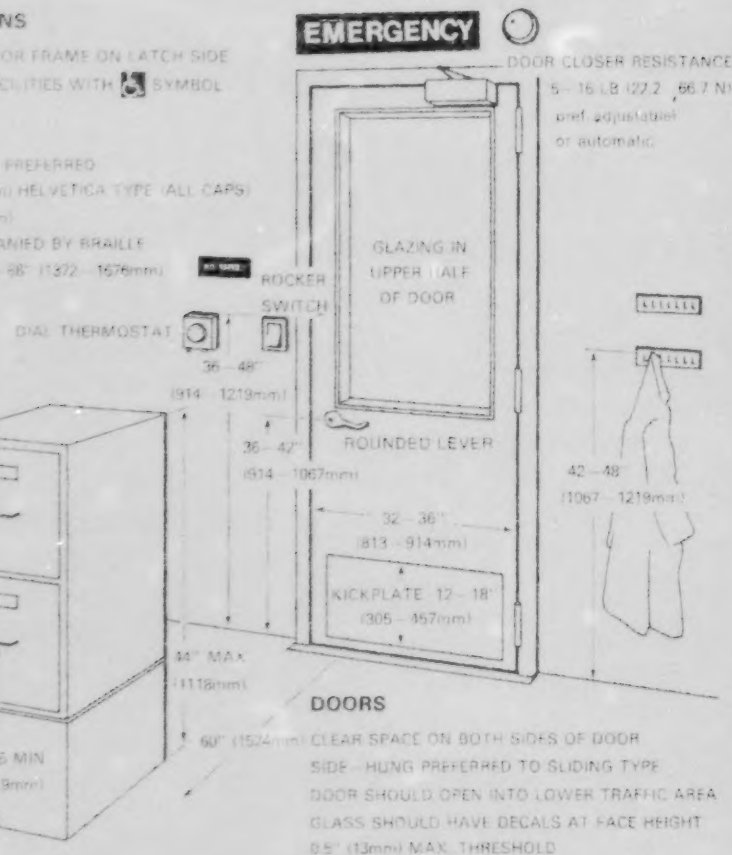
LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH SYMBOL

LETTERING

LIGHT-ON-DARK PREFERRED
0.825" (21mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT 14" (355) (1532 - 1676mm)

TELEPHONE AIDS:

SPEAKERPHONES
HEADSET RECEIVER (CONTROL)
ADJUSTABLE ARM FOR RECEIVER



DOORS

CLEAR SPACE ON BOTH SIDES OF DOOR
 SIDE-HUNG PREFERRED TO SLIDING TYPE
 DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
 GLASS SHOULD HAVE DECALS AT FACE HEIGHT
 0.5" (13mm) MAX. THRESHOLD

MINIMIZE EMOTIONAL STRESS

AVOID FREQUENT CHANGES IN WORK SCHEDULE OR LEVEL OF PHYSICAL EXERTION

MINIMIZE (DO NOT ELIMINATE) REQUIREMENTS OF MOBILITY, REACH, LIFTING (MECHANICAL REACHERS, WHEELED CARTS MAY BE USED)

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH

WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

LIMITATION OF STAMINA

AFFECTS APPROX. 3% OF U.S. POPULATION

WORK STATION

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
LEVEL OF PHYSICAL EXERTION* (OTHER SUPPORT)

STORAGE CABINETS

FOR SUPPORT STABILIZE MATERIALS IN USE (1 x 36 mm)
DRAWERS SHOULD BE OPERABLE WITH ONE HAND

WORKSITE 1

LIMITATION OF STAMINA

Persons with this limitation experience shortness of breath and/or abnormal elevation of blood pressure due to mild physical exertion. Approximately 3% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Asthma	Multiple Sclerosis
Arthritis	Muscular Dystrophy
Cardiac Conditions	Myasthenia Gravis
Cerebral Palsy	Parkinson's Disease
Cerebrovascular Accidents (Stroke)	Renal Disease
Chronic Bronchitis	Scoliosis/Lordosis/Kyphosis
Cystic Fibrosis	Spinal Cord Injury
Emphysema	Tuberculosis
Hypertension	

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

NON-SLIP MATS
TELEPHONE AIDS

49

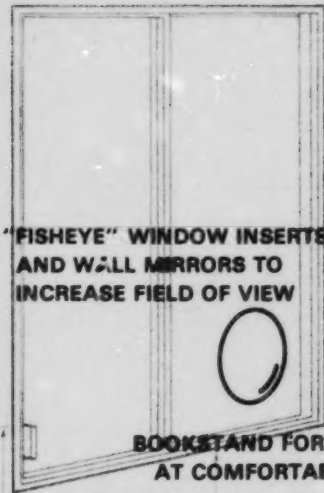
50

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

SLIDING WINDOWS PREFERRED



BOOKSTAND FOR HOLDING DOCUMENTS AT COMFORTABLE READING ANGLE

WINDOW CONTROLS

20 - 54" (508 - 1372mm)
MAX. OPERATING FORCE
5 LBS (22.2 N)

18 - 48"
(457 - 1219mm)

23.5 - 35"
(598 - 899mm)

3 - 12" (227 - 305mm)
MAX. SHELF HEIGHT
63" (1600mm)

LOCATE BULKIEST OBJECTS
ON LEVEL WITH USER

BOOKSTAND FOR HOLDING DOCUMENTS AT COMFORTABLE READING ANGLE

16.5" MIN
(419mm)

TELEPHONE AIDS:
SPEAKERPHONES
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER

TYPEWRITER TILTED FOR BETTER VIEW OF COPY WORK

WORK STATION

AVOID CENTER DRAWERS
24" (610mm) MIN. KNEE WELL WIDTH
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

FACE WORKSTATION TOWARD CO-WORKERS AND OFFICE TRAFFIC FOR EASIER COMMUNICATION

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)
RECLINING SWIVEL CHAIR FOR WIDER FIELD OF VIEW

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

LIGHT ON DARK PREFERRED
0.625 - 1" (16 - 25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT 54 - 66" (1372 - 1676mm)

DIAL THERMOSTAT

36 - 48"
(914 - 1219mm)

ROCKER SWITCH

36 - 42"
(914 - 1067mm)

HOUNDED LEVER

32 - 36"
(813 - 914mm)

KICKPLATE 12 - 18"
(305 - 457mm)

DOORS

60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE-HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLASHING VISUAL ALARM (less than 5 Hz)
VISUAL WARNINGS WITHIN FIELD OF VIEW

EMERGENCY

DOOR CLOSER RESISTANCE
5 - 15 LB (22.2 - 66.7 N)
pref. adjustable
or automatic

GLAZING IN UPPER HALF OF DOOR

EMERGENCY

EMERGENCY

42 - 48"
(1067 - 1219mm)

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID SCULPTURED TEXTURES OR CHANGES IN DIRECTION OF GRAIN
THIN, HEAVY-DUTY UNPADDED LOOP PILE CARPETING PREFERRED
CARPETING SHOULD BE FIRMLY FIXED TO FLOOR

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
DIFFICULTY IN MOVING HEAD
AFFECTS APPROX. 1% OF U.S. POPULATION

DIFFICULTY IN MOVING HEAD

Persons with this limitation cannot easily look up, down, and/or to the side. Approximately 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Arthritis
- Cerebral Palsy
- Contractures due to Burns
- Muscular Dystrophy
- Neck Brace Wearers
- Parkinson's Disease
- Torticollis

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- BOOKSTANDS
- "FISHEYE" WINDOW INSERTS AND WALL MIRRORS
- TELEPHONE AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

A black and white photograph of a closed window. The window has a vertical frame with a handle on the left side. The window is closed, and the glass is clear. The frame is made of wood or metal. The handle is a simple, rectangular piece. The window is set into a wall. The photograph is taken from a slightly low angle, looking up at the window. The lighting is even, and the image is clear. There are no other objects or people in the image. The window is the central focus of the photograph. The handle is a small detail that adds to the overall appearance of the window. The frame is a simple, functional design. The window is a common feature in many buildings. The photograph is a straightforward, unembellished representation of the window. The image is in black and white, which gives it a classic, timeless feel. The window is a simple, functional object, but the photograph captures it in a way that makes it a subject of interest. The handle is a small detail that adds to the overall appearance of the window. The frame is a simple, functional design. The window is a common feature in many buildings. The photograph is a straightforward, unembellished representation of the window. The image is in black and white, which gives it a classic, timeless feel. The window is a simple, functional object, but the photograph captures it in a way that makes it a subject of interest.

18–48°
457–1219mm

40N- ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID SCULPTURED TEXTURES OR CHANGES IN DIRECTION OF GRAIN
THIN, HEAVY, DUTY UNPADDED LOOP PILE CARPETING PREFERRED
CARPETING SHOULD BE FIRMLY FIXED TO FLOOR

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

LIMITATION OF SENSATION

LOWER EXTREMITY AND MOIST SENSATION LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

AFFECTS APPROX. 1% OF U.S. POPULATION

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

AVOID SITTING FOR LONG PERIODS OF TIME

6) CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE--HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

DRAWERS WITH ROLLERS FOR EASY OPERATION
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
DRAWERS SHOULD BE OPERABLE WITH ONE HAND
STORAGE FOR HAZARDOUS MATERIALS, SHARP OBJECTS, ETC.
SHOULD BE CLEARLY LABELLED

LIMITATION OF SENSATION

Persons with this limitation have impaired nerve reception (heat, touch, pain, pressure) in various parts of the body. Approximately 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Cerebrovascular Accidents (Stroke)
Spinal Cord Injury
Trauma

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Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

SLIDING WINDOWS PREFERRED

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

LIGHT ON DARK, PREFERRED
0.625 - 1" (16 - 25mm) HELVETICA TYPE (ALL CAPS)
RAISED: 0.03 - 0.1mm
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT: 54 - 66" (1372 - 1676mm)

DUPLICATE TACTILE SIGNAGE 30" (762mm) ABOVE FLOOR IF NEEDED

EMERGENCY

DOOR CLOSER RESISTANCE:
2 LB (8.9 N) MAX.

pref. adjustable
or automatic

GLAZING IN
UPPER HALF
OF DOOR

36" (914mm) OR SWITCH EXTENSION

36" (914mm) ROUNDED LEVER

32" (813mm) KICKPLATE 12" (305mm)

DOORS

60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE-HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD



WINDOW CONTROLS
20-34" (508-863mm)
MAX. OPERATING FORCE
5 LB (22.2 N)

MAX. SHELF HEIGHT
36" (914mm)
AVOID LIP ON SHELF EDGE

TELEPHONE AIDS:
SPEAKERPHONE
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER

**ELECTRIC SELF-CORRECTING,
AUTO-RETURN TYPEWRITER
(HANDREST MAY ALSO HELP)**

WORK STATION

AVOID CENTER DRAWERS
24" (610mm) MIN. KNEE WELL WIDTH
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

ARRANGE MATERIALS WITHIN 18" (457mm) REACH IF POSSIBLE
DESK-TOP FILES AND ORGANIZERS FOR BETTER USE OF SPACE

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

STORAGE CABINETS

ROLLERS FOR EASY OPERATION
LES. 4" x 1.5" (102mm x 38mm)
DRAWERS SHOULD BE OPERABLE WITH ONE HAND

AVOID DRAWERS DEEPER THAN 12" (305mm)

AVOID CABINETS WITH DOORS THAT HINGE UP OR DOWN

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID SCULPTURED TEXTURES OR CHANGES IN DIRECTION OF GRAIN
THIN, HEAVY-DUTY UNPADDED LOOP PILE CARPETING PREFERRED
CARPETING SHOULD BE FIRMLY FIXED TO FLOOR

MECHANICAL "REACHERS" CAN AID IN OPERATION OF DOORS, FILES, WINDOWS, OTHER CONTROLS, AS WELL AS IN ACCESS TO MATERIALS

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH

WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

DIFFICULTY IN LIFTING AND REACHING WITH ARMS

AFFECTS APPROX. 6% OF U.S. POPULATION

WORKSITE 1

DIFFICULTY IN LIFTING AND REACHING WITH ARMS

Persons with this limitation experience decreased mobility, range of motion, and/or strength in their upper extremities. Approximately 6% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Cardiac Conditions
- Cerebral Palsy
- Congenital Deformities
- Multiple Sclerosis
- Muscular Dystrophy
- Spinal Cord Injury

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- LIGHT SWITCH EXTENSIONS
- MECHANICAL "REACHERS"
- OPEN DESK-TOP FILES AND STORAGE
- TYPEWRITERS

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Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

EASIER DOCUMENT ACCESS
USING BOOKSTAND,
MICROFILM VIEWER,
OR READING MACHINE
(SEE "CONTROLS" AT RIGHT)



TELEPHONE AIDS:
SPEAKERPHONE
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER
ENLARGED "TOUCHTONE" BUTTONS



PEN/PENCIL
THROUGH RUBBER BALL OR
HARD FOAM FOR EASIER GRASP

**ELECTRIC SELF-CORRECTING,
AUTO-RETURN TYPEWRITER**
WITH KEYGUARD FOR GREATER
HAND SUPPORT AND ACCURACY
AND PAPER ROLL

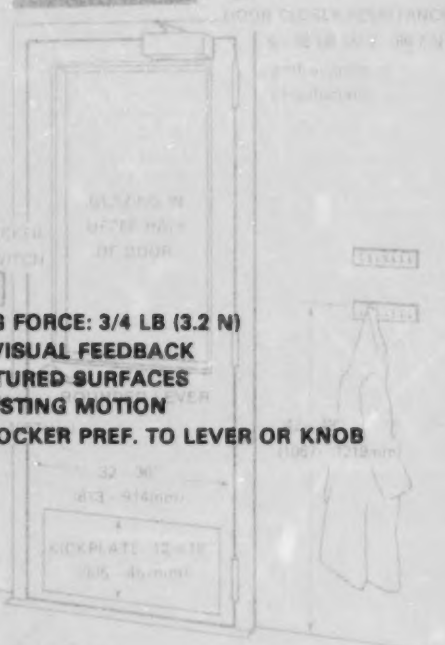
CASSETTE TAPE RECORDER FOR
MESSAGES, MEMOS, DICTATION, ETC.

WORK STATION

BULKY OBJECTS SHOULD BE SLID RATHER THAN LIFTED
USE SLICK SURFACES FOR EASIER MOVEMENT OF MATERIALS
USE BOLTS, CLAMPS, OR NON-SLIP MATS WHERE STABILITY IS NEEDED

CONTROLS:
OPTIMUM OPERATING FORCE: 3/4 LB (3.2 N)
PROVIDE AUDITORY/VISUAL FEEDBACK
AVOID SLICK, UNTEXTURED SURFACES
AVOID NEED FOR TWISTING MOTION
PUSH-BUTTON OR ROCKER PREF. TO LEVER OR KNOB

EMERGENCY



DOORS

AVOID DRAWERS DEEPER THAN 12" (305mm)
OPEN DESK-TOP STORAGE PREFERABLE

STORAGE CABINETS

DIFFICULTY IN HANDLING AND FINGERING

AFFECTS APPROX. 1% OF U. S. POPULATION

WORKSITE 1

DIFFICULTY IN HANDLING AND FINGERING

Persons with this limitation experience decreased mobility, range of motion, and/or strength in their hands. Approximately 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Amputations	Muscular Dystrophy
Arthritis	Myasthenia Gravis
Bilateral Hemiparetic	Parkinson's Disease
Cardiac Disorders	Polymyositis
Cerebral Palsy	Severe Burns
Cerebrovascular Accidents (Stroke)	Spinal Cord Injury
Congenital Deformities	Syringomyelia
Dupuytren's Contracture	
Multiple Sclerosis	

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BOOKSTANDS	READING MACHINES
CASSETTE TAPE RECORDERS	TELEPHONE AIDS
MICROFILM VIEWERS	TYPEWRITERS
NON-SLIP MATS	TYPEWRITER KEYGUARDS, PAPER ROLLS
OPEN DESK-TOP FILES AND STORAGE	

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

SLIDING WINDOWS PREFERRED

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH  SYMBOL

LETTERING

LIGHT ON DARK, PREFERRED
0.625-1" (16-25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT 54-66" (1372-1676mm)

FLASHING VISUAL ALARM (less than 5 Hz)
8000 Hz AUDITORY ALARM (120 db max.)

EMERGENCY

DOOR CLOSER RESISTANCE

5-15 LB (22.2-66.7 N)
pref. adjustable
or automatic

EASIER DOCUMENT ACCESS
USING BOOKSTAND,
MICROFILM VIEWER,
OR READING MACHINE
SEE "CONTROLS" AT RIGHT

TELEPHONE AIDS:
SPEAKERS
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER

DIAL THERMOSTAT

CONTROLS:
USE PUSH-BUTTON OR ROCKER TYPE
PROVIDE AUDITORY/VISUAL FEEDBACK
AVOID SLICK, UNTEXTURED SURFACES

ELECTRIC, SELF-CORRECTING,
AUTO-RETURN TYPEWRITER
WITH PAPER ROLL

CASSETTE TAPE RECORDER FOR
MESSAGES, MEMOS, DICTATION, ETC.

WORK STATION

AVOID CENTER DRAWERS

SLICK WORK SURFACE FOR
EASIER MOVEMENT OF MATERIALS

WORK SURFACE SHOULD BE RAISED OR LOWERED
FOR WORKING WITH FEET OR MOUTHSTICK

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK

STORAGE CABINETS

DOORS WITH ROLLERS FOR EASY OPERATION

U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)

DRAWERS SHOULD BE OPERABLE WITH ONE HAND

OPEN DESK-TOP FILES AND STORAGE

DOORS

CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE-HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

WINDOW CONTROLS

20-54" (508-1372mm)

MAX. OPERATING FORCE

5 LB (22.2 N)

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID SCULPTURED TEXTURES OR CHANGES IN DIRECTION OF GRAIN
THIN, HEAVY-DUTY UNPADDED LOOP PILE CARPETING PREFERRED
CARPETING SHOULD BE FIRMLY FIXED TO FLOOR

PERSONS WITH THIS LIMITATION MAY COMPENSATE THROUGH USE OF A MOUTHSTICK, THEIR FEET, OR ELECTRO-MECHANICAL AIDS.
ENVIRONMENTAL CONTROL SYSTEMS ARE AVAILABLE FOR OPERATION OF TELEPHONE, DOOR, LIGHTING, OR OTHER ELECTRICAL APPLIANCES.

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH

WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

INABILITY TO USE UPPER EXTREMITIES

AFFECTS APPROX. 2% OF U.S. POPULATION

INABILITY TO USE UPPER EXTREMITIES

Persons with this limitation experience complete paralysis, severe incoordination, or loss of upper extremities. Approximately 2% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Amputations
- Arthritis
- Cerebral Palsy
- Congenital Deformities
- Polio
- Spinal Cord Injury

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- BOOKSTANDS
- CASSETTE TAPE RECORDERS
- DOOR OPENERS
- ENVIRONMENTAL CONTROLS
- MICROFILM VIEWERS

- OPEN DESK-TOP FILES AND STORAGE
- READING MACHINES
- SOUND-OPERATED AND OTHER REMOTE SWITCHES
- TELEPHONE AIDS
- TYPEWRITERS
- TYPEWRITER KEYGUARDS, PAPER ROLLS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES.
AVOID BULKY SURFACES AND PROTRUDING OBJECTS.
AVOID EXCESSIVE SOUND ABSORPTION.

INTERIOR SIGNS

LOCATED IN DOOR FRAME ON LATCH SIDE.
EASY TO REACH FOR PEOPLE WITH SHORT REACH.

LETTERING

LIGHT ON DARK BACKGROUND.
8000-17100 LUX (60-160 FOOT-CANDLES).
MINIMUM 24" (610mm) HIGH.
MAY BE ACCOMPANIED BY BRAILLE.
SIGN HEIGHT: 14" (355mm) TO 40" (1016mm).

TELEPHONES

RECEIVER WITH VOLUME CONTROL.
HANDSET CORD: 36" (914mm) MIN.

DUAL THERMOSTAT

BUZZER SWITCH

EMERGENCY

DOOR TO BE OPENED BY PEOPLE WITH SHORT REACH.

DOOR TO BE OPENED BY PEOPLE WITH SHORT REACH.

DOOR TO BE OPENED BY PEOPLE WITH SHORT REACH.

DOOR TO BE OPENED BY PEOPLE WITH SHORT REACH.

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DOOR TO BE OPENED BY PEOPLE WITH SHORT REACH.

DOOR TO BE OPENED BY PEOPLE WITH SHORT REACH.

DOOR TO BE OPENED BY PEOPLE WITH SHORT REACH.

MAX. REACH HEIGHT: 62" (1585mm)

MAX. REACH HEIGHT: 62" (1585mm)

MAX. REACH HEIGHT: 62" (1585mm)

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MAX. REACH HEIGHT: 62" (1585mm)

MAX. REACH HEIGHT: 62" (1585mm)

BULKY OBJECTS SHOULD BE SLID RATHER THAN LIFTED

WORK STATION

AVOID CENTER DRAWERS.
24" (610mm) MIN. FREE WELL WIDTH.
AVOID SHARP EDGES AND CORNERS.
NON-GLARE LIGHTING TO MINIMIZE FATIGUE.

MINIMIZE NEED FOR REACHING UP OR BENDING DOWN

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK.
FEET SHOULD REST ON FLOOR OR OTHER SUPPORT.

**SEATING WITH FULL ARMS AND BACKREST, STABLE BASE
SEAT BELTS AND/OR CUSHIONS FOR ADDED STABILITY**

STORAGE CABINETS

WITH ROLLERS FOR EASY OPERATION.
U-SHAPED HANDLES: 8" x 1/2" (203mm x 12mm).
DRAWERS SHOULD BE OPERABLE WITH ONE HAND.

DOORS

GLASS PANELS ON BOTH SIDES OF DOOR.
SIDE - HUNG PANELS TO BE SLIDED. THE
DOOR SHOULD OPEN WITH LOWER TRIMING AREA.
GLASS SHOULD HAVE HEIGHT OF 48" (1219mm).
6" (152mm) MAX. THICKNESS.



WINDOW CONTROLS:
36" (914mm) MIN. HEIGHT
MAX. OPERATING AREA:
36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

36" (914mm) MIN. HEIGHT
36" (914mm) MIN. WIDTH
36" (914mm) MIN. DEPTH

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES THAT WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

DIFFICULTY IN SITTING
AFFECTS APPROX. 5% OF U.S. POPULATION

DIFFICULTY IN SITTING

Persons with this limitation experience lack of strength, restriction of motion, and/or lack of trunk control in bending, turning, or balance. Approximately 5% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Arthritis of the Spine or Hips
- Congenital Deformities
- Scoliosis/Kyphosis/Lordosis
- Spinal Cord Injury

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

SLIDING WINDOWS PREFERRED



WINDOW CONTROLS
20-54" (508-1372mm)
MAX. OPERATING FORCE
5 LB (22.2 N)

18-48"
(457-1219mm)

23.5-35"
(598-889mm)

9-12" (227-305mm)
MAX. SHELF HEIGHT
63" (1600mm)

LOCATE BULKIEST OBJECTS
ON LEVEL WITH DESK

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN

**BAR OR HANDLE ASSISTS
FIRMLY ANCHORED WHEREVER
ADDED SUPPORT IS NEEDED**

16.5" MIN.
(419mm)

29-38"
(737-965mm)

30-32"
(762-813mm)

WORK STATION

AVOID CENTER DRAWERS
24" (610mm) MIN. KNEE WELL WIDTH
AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

PROVIDE CONVENIENT STORAGE FOR WALKING AIDS AT WORKSTATION

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

SEATING WITH FULL ARMS AND BACKREST (SWIVEL, CASTER BASE MAY AID SOME PERSONS)

OR RISING-ASSIST CHAIR

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

LIGHT ON-DARK PREFERRED
8X25-1" (10-25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.032" (1mm)
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT 54-66" (1372-1676mm)

DIAL THERMOSTAT

36-48"
(914-1219mm)

36-42"
(914-1067mm)

32-36"
(813-914mm)

44" MAX.
(1118mm)

60" (1524mm)

16.5 MIN.
(419mm)

29-30"
(737-762mm)

adjustable
height pref.

44" MAX.
(1118mm)

60" (1524mm)

16.5 MIN.
(419mm)

29-30"
(737-762mm)

adjustable
height pref.

44" MAX.
(1118mm)

60" (1524mm)

16.5 MIN.
(419mm)

29-30"
(737-762mm)

adjustable
height pref.

44" MAX.
(1118mm)

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(419mm)

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(737-762mm)

adjustable
height pref.

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adjustable
height pref.

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(1118mm)

60" (1524mm)

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(419mm)

29-30"
(737-762mm)

adjustable
height pref.

44" MAX.
(1118mm)

60" (1524mm)

16.5 MIN.
(419mm)

29-30"
(737-762mm)

adjustable
height pref.

44" MAX.
(1118mm)

60" (1524mm)

16.5 MIN.
(419mm)

29-30"
(737-762mm)

adjustable
height pref.

44" MAX.
(1118mm)

60" (1524mm)

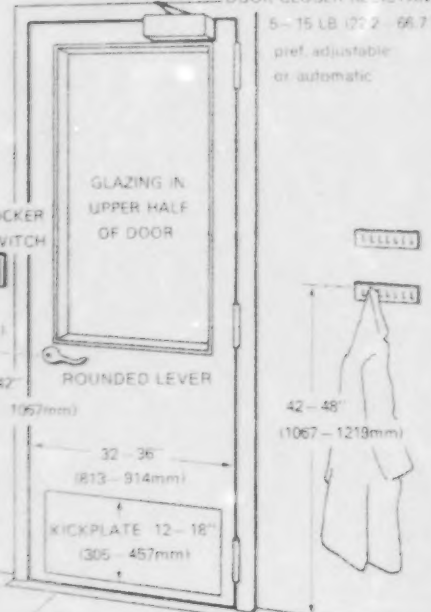
FLASHING VISUAL ALARM (less than 5 Hz)

8000 Hz AUDITORY ALARM (120 db max.)

EMERGENCY

DOOR CLOSER RESISTANCE

5-15 LB (22.2-66.7 N)
pref. adjustable
or automatic



DOORS

CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE-HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID SCULPTURED TEXTURES OR CHANGES IN DIRECTION OF GRAIN
THIN, HEAVY-DUTY UNPADDED LOOP PILE CARPETING PREFERRED
CARPETING SHOULD BE FIRMLY FIXED TO FLOOR

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH

WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS

DIFFICULTY IN USING LOWER EXTREMITIES

AFFECTS APPROX. 4% OF U.S. POPULATION

NOTE:

FOR PERSONS USING WHEELCHAIRS, THE FOLLOWING ADDITIONAL REQUIREMENTS ARE NECESSARY TO WORKSITE 1

DIFFICULTY IN USING LOWER EXTREMITIES

Persons with this limitation experience slowness of gait, impairment of kneeling, rising, walking, standing, and/or stair-climbing. Approximately 4% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Arthritis
Cancer
Cardiac Disorders
Cerebral Palsy
Cerebrovascular Accidents (Stroke)
Congenital Deformities
Hemophilia
Multiple Sclerosis
Muscular Dystrophy

Parkinson's Disease
Spina Bifida
Spinal Cord Injury

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BAR OR HANDLE ASSISTS
CANE/CRUTCH STORAGE CLIPS
RISING-ASSIST CHAIRS
WHEELED CARTS, SHOULDER BAGS, CARRYING AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE BLUE-REFLECTANT, NON-FLAME MATERIALS
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND REFLECTION

GLASS WINDOWS PREFERRED



WINDOW CONTROL
24-30 IN. HIGH
MAX. THREAT TO PEOPLE
5-10 IN. DIA.



TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN

LOCATE VULNERABLE OBJECTS
ON BENCH WITH DESK

**BAR OR HANDLE ASSISTS
FIRMLY ANCHORED WHEREVER
ADDED SUPPORT IS NEEDED**

WORK STATION

AVOID CENTER DRAWERS
24" (610mm) MIN. KNEE WELL WIDTH
ALSO: SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

AVOID SLICK SURFACES WHICH MAY BE USED FOR SUPPORT
MINIMIZE NEED FOR REACHING UP OR BENDING DOWN

SEATING

ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)
SEATING WITH FULL ARMS AND BACKREST, STABLE BASE

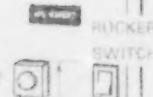
INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH SYMBOL

LETTERING

LIGHT-ON DARK PREFERRED
CHAR. 11-19 (28-48mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (0.76mm)
MAY BE ACCOMPANIED BY BRAILLE
SIGN HEIGHT: 54-66" (1372-1676mm)

(WALL THERMOSTAT)



OPTIMUM CONTROL ACTIVATING FORCE: 2 LB (8.9N)

EMERGENCY



DOORS

60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
SIDE-HUNG PREFERRED TO SLIDING TYPE
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

STORAGE CABINETS

ROLLERS FOR EASY OPERATION
HANDLES: 4" x 1.5" (102mm x 38mm)
DRAWERS SHOULD BE OPERABLE WITH ONE HAND
AVOID DRAWERS DEEPER THAN 12" (305mm)

FLOORS

4 IN. MIN. THICK MATS WITH NON-SLIP DARK COLOR
4 IN. CLEAR DISTANCE AROUND THE DOOR LEVEL CHANGE
4 IN. NON-SLIP TEXTURE ON CHANGES IN DIRECTION OF GROUND
DOOR LATCH AT 36 IN. MIN. HIGH FOR EASY OPERATION
LIFTING SURFACES TO BE REACHABLE TO FLOOR

ALLOW AMPLE, UNCLUTTERED AISLE SPACE
MINIMIZE NEED FOR STANDING, WALKING, CARRYING

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
SPECIFIC FUNCTIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

POOR BALANCE

AFFECTS APPROX. 2% OF U.S. POPULATION

WORKSITE 1

80

POOR BALANCE

Persons with this limitation find it difficult or impossible to maintain balance when moving or when stationary (standing, walking, rising, stair climbing). Approximately 2% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Amputations

Ataxia

Cerebral Palsy

Cerebrovascular Accidents (Stroke)

Deafness

Dystonia Musculorum Deformans

Multiple Sclerosis

Muscular Dystrophy

Parkinson's Disease

Spinal Cord Injury

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BAR OR HANDLE ASSISTS

WHEELED CARTS, SHOULDER BAGS, CARRYING AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

MODIFICATIONS TO WORKSITE 2

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83

THE FUNCTIONAL LIMITATIONS

All disabilities, regardless of severity, can be functionally described as some combination of the following limitations:

- Difficulty in interpreting information p. 45
- Limitation of sight p. 47
- Limitation of hearing p. 49
- Limitation of speech p. 51
- Susceptibility to fainting, dizziness, seizures p. 53
- Incoordination p. 55
- Limitation of stamina p. 57
- Difficulty in moving head p. 59
- Limitation of sensation p. 61
- Difficulty in lifting and reaching with arms p. 63
- Difficulty in handling and fingering p. 65
- Inability to use upper extremities p. 67
- Difficulty in sitting p. 69
- Difficulty in using lower extremities p. 71
- Poor balance p. 73

In the following pages, the WORKSITE illustration is presented with additional guidelines for each of the above limitations.

This resource is intended to be used as a framework for planning the environment in cooperation with the disabled person, who knows his or her abilities best. Design suggestions for each limitation should be examined and evaluated with the specific environment and individual in mind. Use this resource as a guide to planning modifications for everyone concerned, and the result will be a more productive environment for disabled and non-disabled as well.

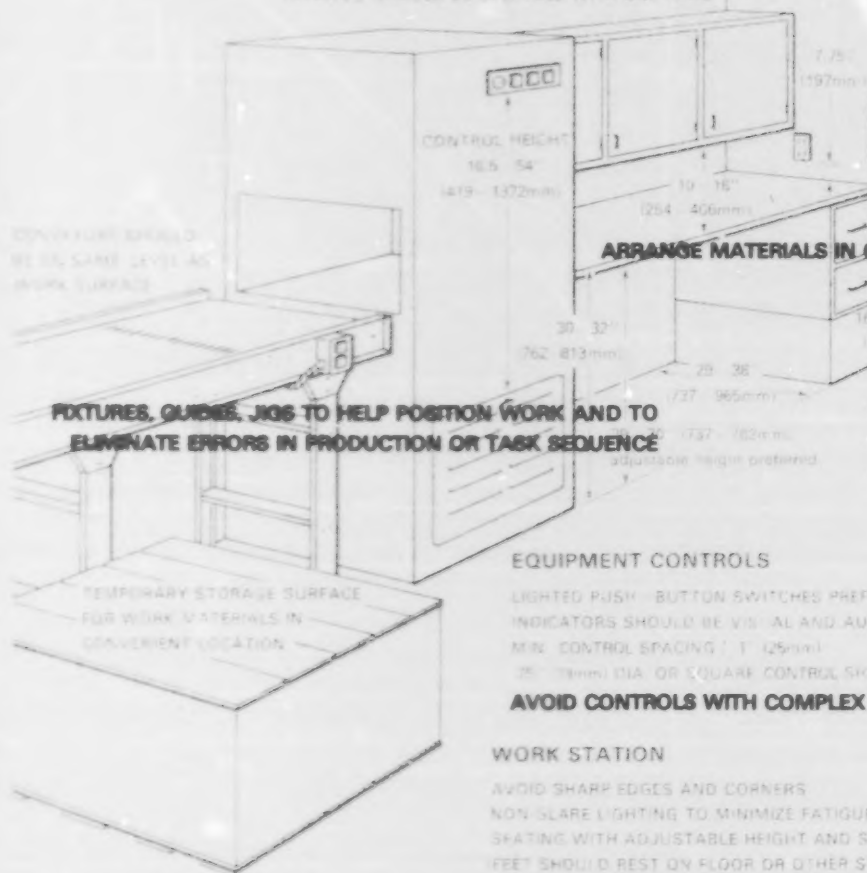
WALLS

USE SLIP-RESISTANT NONGLAZED SURFACES
AVOID BRUSH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SURFACE ABSORPTION

MINIMIZE NOISE FOR BETTER COMMUNICATION

STORAGE CABINETS

CABINET HEIGHT 83" MAX. (1965mm)
U-SHAPED HANDLES: 4" x 1 1/2" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND



INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH PICTORIAL SYMBOL

LABEL HAZARDOUS AREAS CLEARLY

USE SIMPLE WORDS, SYMBOLS, AND/OR NUMBERS

LOCATE LABELS, INSTRUCTIONS CLOSE TO REFERRED ITEM

6 1/2" - 1" (16 - 25mm) HELVETICA TYPE (ALL CAPS)

RAISED TYPE (1mm)

MAY BE ACCOMPANIED BY BRAILLE

SIGN HEIGHT

54" - 65" (1372 - 1676mm)

PULL TYPE ALARM

36" - 48" (914 - 1219mm)

DIAL HEIGHT

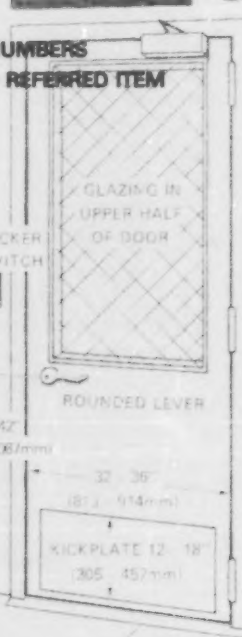
16.5" MIN (419mm)

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN

FLASHING VISUAL ALARM (less than 5 Hz)
800 Hz AUDITORY ALARM (20 Hz - 1000 Hz)

EMERGENCY



DOOR CLOSER RESISTANCE

5.15 LB (2.2 - 98.7N)

pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED

DOOR HANDLES SHOULD BE

U-SHAPED: 4" x 1 1/2" (102mm x 38mm)

FLOORS

SIDE HINGE PREFERRED TO SLIDING TYPE

60" (1524mm)

CLEAR SPACE ON BOTH SIDES OF DOOR

DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA

GLASS SHOULD HAVE DECALS AT FACE HEIGHT

6.5" (13mm) MAX. THRESHOLD

MINIMIZE NOISE, CLUTTER, AND OTHER DISTRACTIONS

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS

AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE

AVOID PATTERNS OR EXCESSIVE TEXTURES

FLOOR COVERING FIRMLY FIXED TO FLOOR

EQUIPMENT CONTROLS

LIGHTED PUSH-BUTTON SWITCHES PREFERRED

INDICATORS SHOULD BE VISUAL AND AUDITORY

MIN. CONTROL SPACING 1" (25mm)

25" (63mm) DIA. OR SQUARE CONTROL SHAPE

AVOID CONTROLS WITH COMPLEX FUNCTIONS

WORK STATION

AVOID SHARP EDGES AND CORNERS

NON-GLARE LIGHTING TO MINIMIZE FATIGUE

SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK

FEET SHOULD REST ON FLOOR OR OTHER SUPPORT

AVOID ISOLATED WORKSTATION

DEFINE WORK ROUTINE AND TASK SEQUENCE CLEARLY

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

DIFFICULTY IN INTERPRETING INFORMATION

AFFECTS APPROX. 7% OF U.S. POPULATION

DIFFICULTY IN INTERPRETING INFORMATION

Persons with this limitation have limited understanding of spoken or written information. Approximately 7% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Cerebral Palsy
- Cerebrovascular Accidents (Stroke)
- Mental Retardation

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

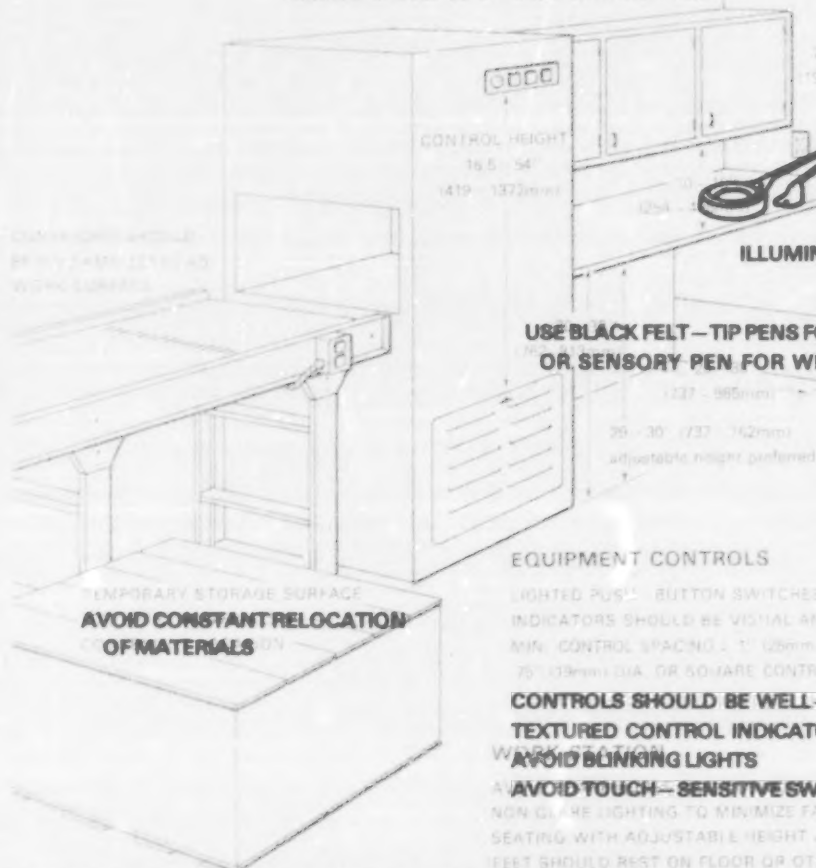
WALLS

CONTRAST SURFACES
AUGMENT SURFACES AND PROTRUDING OBJECTS
AUGMENT TOTAL SOUND ABSORPTION

MINIMIZE NOISE FOR BETTER COMMUNICATION

STORAGE CABINETS

CABINET HEIGHT 63" MAX. (1600mm)
U-SHAPED HANDLES 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND



AVOID CONSTANT RELOCATION
OF MATERIALS

INTERIOR SIGNS

LOCATE CLEAR VISION FRAMES ON LATCH SIDE
LARGE USABLE FACILITIES WITH 4" SYMBOL

ILLUMINATE SIGNS WELL

USE SIMPLE WORDS, SYMBOLS, AND/OR NUMBERS

LIGHT ON - DARK PREFERRED
8.8% F.I.H. (2048) HELVETICA TYPE (ALL CAPS)
RAISED 3.00 - 1.8mm
MAY BE ACCOMPANIED BY BRaille

AUDIBLE INDICATOR FOR MULTIPLE
PHONE LINES

ILLUMINATED MAGNIFIER

USE BLACK FELT - TIP PENS FOR MAXIMUM LEGIBILITY
OR SENSORY PEN FOR WRITING OR DRAWING RAISED LINES

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm)

EQUIPMENT CONTROLS

LIGHTED PUSH-BUTTON SWITCHES PREFERRED
INDICATORS SHOULD BE VISUAL AND AUDITORY
MIN. CONTROL SPACING 1" (25mm)
75" (19mm) DIA. OR 50-MARE CONTROL SHAPE

CONTROLS SHOULD BE WELL-SPACED AND CONTRASTED

TEXTURED CONTROL INDICATORS SHOULD BE NEXT TO CONTROL NOT ON IT

AVOID BLINKING LIGHTS

AVOID TOUCH-SENSITIVE SWITCHES

NON-GLARE LIGHTING TO MINIMIZE FATIGUE
SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
FEET SHOULD REST ON FLOOR OR OTHER SUPPORT

FLASHING VISUAL ALARMS (max 5 Hz)
800 Hz AUDITORY ALARM (2200 Hz)

EMERGENCY

DOOR CLOSER RESISTANCE
5 - 15 (22.2 - 66.7) lb
not adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED,
DOOR HANDLES SHOULD BE
U-SHAPED 4" x 1.5" (102mm x 38mm)

ROUGH-TEXTURED LEVERS INDICATE
EMERGENCY EXIT ONLY

DOORS TO HAZARDOUS AREAS
SHOULD BE KEPT LOCKED

KICKPLATE 12 - 18"
(305 - 457mm)

ENTRANCE INDICATORS

2" x 1/8" (50 x 3mm) APPLIED STRIPS WITH 1/2" (13mm) SPACING
OR
1/8" (3mm) GROOVES IN SURFACE WITH 2" (50mm) SPACING

DOORS
36" (914mm)

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID PATTERNS OR EXCESSIVE TEXTURES
FLOOR COVERING FIRMLY FIXED TO FLOOR

CONTRAST FURNITURE, DOORWAYS, ETC. WITH SURROUNDINGS BY COLOR AND BRIGHTNESS
MINIMIZE CLUTTER, DO NOT REMOVE ALL "LANDMARKS" (FURNITURE, PARTITIONS) FOR NAVIGATION

WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
FUNCTIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

AFFECTS LESS THAN 1% OF U.S. POPULATION

LIMITATION OF SIGHT

Persons with this limitation include those who cannot read newspaper-sized print, are legally blind (20/200), have vision field defect of 10% or less, or have hemianopsia (one-sided vision). Less than 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Arthritis (Steroid Implications)
Cancer
Cataracts
Cerebral Palsy
Cerebrovascular Accidents (Hemianopsia)
Congenital or Traumatic Blindness
Diabetes Retinopathy
Glaucoma
Retina Degeneration

Trauma
Tunnel Vision

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BOOK STANDS
BRAILLE COMMUNICATION SYSTEMS
ILLUMINATED MAGNIFIERS
LEVER DOOR HANDLES
SENSORY PENS
"TALKING" CALCULATOR
TELEPHONE AIDS
VIDEO READING AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE 1/2" (12.7mm) OR THICKER ADJUSTABLE BRACKETS
AVOID POINTEDES AND OTHER PROTRUDING OBJECTS
REMOVE DATA AND/OR ACCESSORIES

STORAGE CABINETS

MINIMUM HEIGHT 84" (2133mm)
DOOR HINGES: 1" (25.4mm) x 1/2" (12.7mm)
DOOR CLOSERS: 1/2" (12.7mm) x 1/2" (12.7mm)

INTERIOR SIGNS

LOCATE: 1/2" (12.7mm) THICK ON LATCH SIDE
SAFE: USABLE FACILITIES WITH SYMBOL

LETTERING

1/2" (12.7mm) HIGH
0.525" (13.3mm) DEEP
HELVETICA TYPE (ALL CAPS)
BOLD OR 1/2" (12.7mm)
NEVER BE ACCOMPANIED BY BRU L

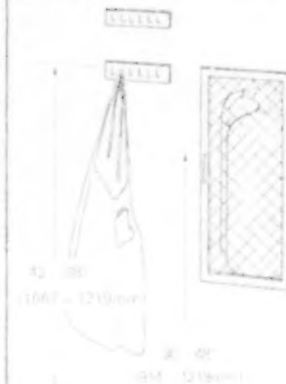
FLASHING VISUAL ALARM (max 100 ft)
800 Hz AUDITORY ALARM (120 dB max)

EMERGENCY



DOOR CLOSER RESISTANCE
5-15 LB (22.7 - 66.7N)
just adjustable in summer

IF EXTINGUISHERS MUST BE RECESSED
DOOR HANDLES SHOULD BE
U-SHAPED: 4" x 1.5" (102mm x 38mm)



TELEPHONE AIDS:
TELETYPE (TTY)
VISUAL CALL CUE
BONE CONDUCTOR RECEIVER

TELEPHONES

RECEIVER WITH H/2 LINE CONTAIN
HANDSET CORD: 1/2" (12.7mm) MIN

EQUIPMENT CONTROLS

LIGHTED PUSH-BUTTON SWITCHES PREFERRED
INDICATORS SHOULD BE VISUAL AND AUDITORY
TAP CONTROL: 1/2" (12.7mm)
1/2" (12.7mm) DIA OR SQUARE CONTROL SHAPE

VISUAL CONTROL FEEDBACK AND ALARMS

WORK STATION

AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE
SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
EYES SHOULD REST ON FLUOR OR OTHER SUPPORT

FACE WORKSTATION TOWARD CO-WORKERS FOR FACE-TO-FACE COMMUNICATION

DOORS

DOOR HINGES PREFERRED TO GLAZING TYPE
60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECAL AT FACE HEIGHT
81" (2057mm) MAX THRESHOLD

FLOORS

NON-REFLECTANT MATERIALS IN WARM DARK TONES
AVOID COLOR CONTRAST EXCEPT TO DEFINE LINE THROUGH
AVOID PATTERNS OR EXCESSIVE TEXTURES
FLOOR COVERED FIRMLY TO FLOOR

CLEAR WRITTEN INSTRUCTIONS TO MINIMIZE NEED FOR VERBAL ASSISTANCE WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

LIMITATION OF HEARING

AFFECTS APPROX. 3% OF U.S. POPULATION

INDIVIDUAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS

WORKSITE 2

LIMITATION OF HEARING

Persons with this limitation cannot understand usable speech with or without amplification. Approximately 3% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Agenesis of the Pinna
- Brain Damage
- Cancer
- Complications of Other Diseases
- Congenital or Traumatic Loss
- Otosclerosis

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- TELEPHONE AIDS
- TELEPHONE AIDS FOR NON-VERBAL PERSONS (TTY)

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

MINIMIZE NOISE FOR BETTER COMMUNICATION

STORAGE CABINETS

CABINET HEIGHT 83" MAX. (1800mm)
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND

CONVEYORS SHOULD
BE ON SAME LEVEL AS
WORK SURFACE

TEMPORARY STORAGE SURFACE
FOR WORK MATERIALS IN
CONVENIENT LOCATION

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH  SYMBOL

LETTERING

LIGHT ON, DARK PREFERRED
0.025 - 1" (16 - 25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE

TELETYPE (TTY) FOR NON-VERBAL TELEPHONE CONVERSATION

SPEECH SYNTHESIZER OR COMMUNICATOR FOR NON-VERBAL PERSONS

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN.

EQUIPMENT CONTROLS

LIGHTED PUSH-BUTTON SWITCHES PREFERRED
INDICATORS SHOULD BE VISUAL AND AUDITORY
MIN. CONTROL SPACING: 1" (25mm)
7/8" (19mm) DIA. OR SQUARE CONTROL SHAPE

WORK STATION

AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE
SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

FACE WORKSTATION TOWARD CO-WORKERS FOR FACE-TO-FACE COMMUNICATION CLEAR WRITTEN INSTRUCTIONS TO MINIMIZE NEED FOR VERBAL ASSISTANCE

FLASHING VISUAL ALARM (less than 5 Hz)
8000 Hz AUDITORY ALARM (120 dB max.)

EMERGENCY

DOOR CLOSER RESISTANCE
5-15 LB (22.2 - 66.7N)
pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED,
DOOR HANDLES SHOULD BE
U-SHAPED: 4" x 1.5" (102mm x 38mm)

DOORS

SIDE-HING PREFERRED TO SLIDING TYPE
CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID PATTERNS OR EXCESSIVE TEXTURES
FLOOR COVERING FIRMLY FIXED TO FLOOR

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS
LIMITATION OF SPEECH ADDITIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

AFFECTS APPROX. 4% OF U.S. POPULATION

LIMITATION OF SPEECH

Persons with this limitation have slow and/or indistinct speech, or use non-verbal communication. Approximately 4% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Brain Damage
- Cancer
- Cerebral Palsy
- Cerebrovascular Accidents (Stroke)
- Hearing Disorders

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- SPEECH COMPRESSOR/RECORDERS
- SPEECH SYNTHESIZERS, COMMUNICATORS
- TELEPHONE AIDS FOR NON-VERBAL PERSONS (TTY)

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

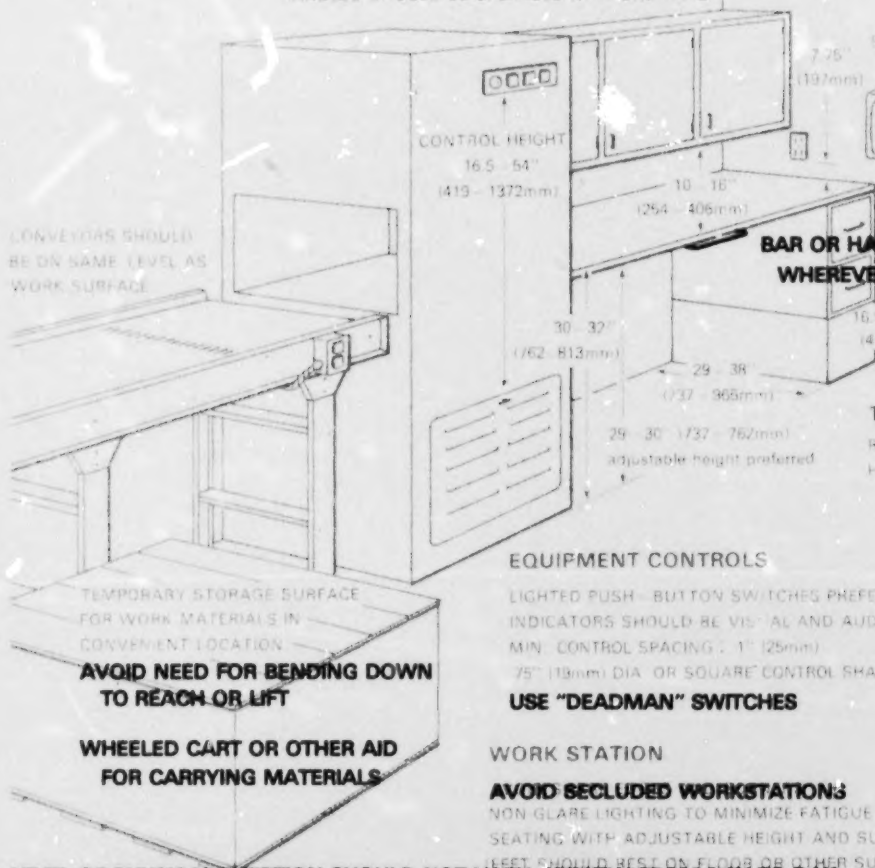
WALLS

USE SLIP-RESISTANT NON-GLARE SURFACES
AVOID HOOKS, SURFACES AND PROTRUDING OBJECTS
AND OPTIMAL SOUND ABSORPTION

STORAGE CABINETS

CABINET HEIGHT 63" MAX. (1600mm)
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND

CONVEYORS SHOULD
BE ON SAME LEVEL AS
WORK SURFACE



TEMPORARY STORAGE SURFACE
FOR WORK MATERIALS IN
CONVENIENT LOCATION

**AVOID NEED FOR BENDING DOWN
TO REACH OR LIFT**

**WHEELED CART OR OTHER AID
FOR CARRYING MATERIALS**

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH SYMBOL

LETTERING

LIGHT ON/DARK PREFERRED
0.625 - 1" (16 - 25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE

SIGN HEIGHT

54 - 66" (1372 - 1676mm)

PULL-TYPE ALARM

36 - 48" (914 - 1219mm)

DOOR HEIGHT

80" (2032mm)

**BAR OR HANDLE ASSISTS FIRMLY ANCHORED
WHEREVER ADDED STABILITY IS NEEDED**

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN.

EQUIPMENT CONTROLS

LIGHTED PUSH-BUTTON SWITCHES PREFERRED
INDICATORS SHOULD BE VISUAL AND AUDITORY
MIN. CONTROL SPACING: 1" (25mm)
.75" (19mm) DIA. OR SQUARE CONTROL SHAPE
USE "DEADMAN" SWITCHES

WORK STATION

AVOID SECLUDED WORKSTATIONS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE
SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

FLASHING VISUAL ALARM (less than 5 Hz)
8000 Hz AUDITORY ALARM (120 db max)

EMERGENCY

**SUDDEN NOISES OR FLASHING LIGHTS
MAY BRING ON SEIZURES**

DOOR CLOSER RESISTANCE

5-15 LB (22.7 - 66.7N)

pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED,
DOOR HANDLES SHOULD BE

U-SHAPED: 4" x 1.5" (102mm x 38mm)



DOORS

SIDE-HUNG PREFERRED TO SLIDING TYPE
60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID PATTERNS OR EXCESSIVE TEXTURES
FLOOR COVERING FIRMLY FIXED TO FLOOR

LEVEL OF PHYSICAL EXERTION SHOULD NOT VARY GREATLY FROM DAY TO DAY

NOTE: IF THIS LIMITATION CANNOT BE CONTROLLED BY MEDICATION, AVOID TASKS IN WHICH THIS LIMITATION MIGHT JEOPARDIZE THE SAFETY OF OTHERS

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH

WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

SUSCEPTIBILITY TO FAINTING, DIZZINESS, SEIZURES

AFFECTS APPROX. 2% OF U.S. POPULATION

SUSCEPTIBILITY TO FAINTING, DIZZINESS, SEIZURES

Persons with this limitation experience inducible or spontaneous fainting, dizziness, and/or seizures. Approximately 2% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Cardiac Conditions
- Cerebral Palsy
- Epilepsy

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- BAR OR HANDLE ASSISTS
- WHEELED CARTS, SHOULDER BAGS, CARRYING AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

LOCATE NEAR BOOK FRAME ON LATCH SIDE
BY BEL USABLE FACILITIES WITH SYMBOL

EMERGENCY

5-15-88 (22:28:20)

DOOR HANDLES SHOULD BE:
1. SHARPED 4" x 1.5" (102mm x 38mm)

**SPEAKEPHONE
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER
ENLARGED "TOUCHTONE" BUTTONS**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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AVOID FINE CONTROL ADJUSTMENTS
AVOID TOUCH-SENSITIVE CONTROLS

**UP ON EDGE OF WORKSURFACE TO KEEP MATERIALS FROM FALLING
MINIMIZE NEED FOR LONG REACH, STRETCHING UP, BENDING DOWN**

UP ON EDGE OF WORKSURFACE TO KEEP MATERIALS FROM FALLING
MINIMIZE NEED FOR LONG REACH, STRETCHING UP, BENDING DOWN

AFFECTS APPROX. 1% OF U.S. POPULATION

106

55

WORKSITE 2

107

INCOORDINATION

Persons with this limitation experience lack of control in placing or directing their extremities (spasticity). Approximately 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Ataxia
- Cerebral Palsy
- Cerebrovascular Accidents
- Hemiplegia
- Multiple Sclerosis
- Parkinson's Disease

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- BAR OR HANDLE ASSISTS
- BOOKSTANDS
- CASSETTE TAPE RECORDERS
- MICROFILM VIEWERS
- NON-SLIP MATS

- READING MACHINES
- TELEPHONE AIDS
- TYPEWRITERS
- TYPEWRITER KEYGUARDS, PAPER ROLLS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

AVOID EXTREMELY DRY AIR, EXTREME OR ABRUPT TEMPERATURE CHANGE
AVOID SMOKE, DUST, FUMES

AVOID SMOKE, DUST, FUMES

INTERIOR SIGNS

LOCATE NEAR OUR FRAME ON CATCH SIDE
LARGE USABLE FACILITIES WITH  SYMBOL

EMERGENCY

DOOR-CLOSER RESISTANCE
5.15-18 (22.2-80.7N)
die† adjustable or automatic

IF EXTINGUISHERS MOUNTED, IF NECESSARY,
DOOR HANDLES SHOULD BE
U- SHAPED, 4" x 1.5" (102mm x 38mm)

TELEPHONE AIDS:
SPEAKERPHONE
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER

TELEPHONES

MAX. ACTIVATING FORCE: 2 LB (8.9 N)

WORK STATION

MINIMIZE STRETCHING, KNEELING, BENDING DOWN
AVOID SLICK SURFACES WHICH MAY BE USED FOR SUPPORT
USE BOLTS, CLAMPS, FIXTURES, OR NON-SLIP MATS TO STAB

DOORS

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID PATTERNS OR EXCESSIVE TEXTURES
STABILIZE MATERIALS IN USE

MINIMIZE EMOTIONAL STRESS

AVOID FREQUENT CHANGES IN WORK SCHEDULE OR LEVEL OF PHYSICAL EXERTION

MINIMIZE (DO NOT ELIMINATE) REQUIREMENTS OF MOBILITY, REACH, LIFTING (MECHANICAL REACHERS, WHEELED CARTS MAY BE USED)

LIMITATION OF STAMINA

AFFECTS APPROX. 3% OF U.S. POPULATION

110

57

WORKSITE 2
111

LIMITATION OF STAMINA

Persons with this limitation experience shortness of breath and/or abnormal elevation of blood pressure due to mild physical exertion. Approximately 3% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Asthma	Multiple Sclerosis
Arthritis	Muscular Dystrophy
Cardiac Conditions	Myasthenia Gravis
Cerebral Palsy	Parkinson's Disease
Cerebrovascular Accidents (Stroke)	Renal Disease
Chronic Bronchitis	Scoliosis/Lordosis/Kyphosis
Cystic Fibrosis	Spinal Cord Injury
Emphysema	Tuberculosis
Hypertension	

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

NON-SLIP MATS
TELEPHONE AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

"FISHEYE" WINDOW INSERTS AND

WALL MIRRORS TO INCREASE FIELD OF VIEW



STORAGE CABINETS

CABINET HEIGHT 83" MAX. (2109mm)
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND

INTERIOR SIGNS

LOCATE REAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH PICTORIAL SYMBOLS

LETTERING

LIGHT ON - DARK PREFERRED
0.625 - 1" (16 - 25mm) HELVETIC TYPE (ALL CAPS)
RAISED 0.031" (0.8mm)
MAY BE ACCOMPANIED BY BRAILLE

TELEPHONE AIDS:

SPEAKERPHONE

HEADSET RECEIVER

ADJUSTABLE ARM FOR RECEIVER

WORKSTANDS TO LOCATE MATERIALS WITHIN COMFORTABLE VIEW

AVOID DRAWERS, STORAGE DEEPER THAN 12" (305mm)
MINIMIZE REACH UP, DOWN, OR BEHIND

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN.

EQUIPMENT CONTROLS

LIGHTED PUSH-BUTTON SWITCHES PREFERRED
INDICATORS SHOULD BE VISUAL AND AUDITORY
MIN. CONTROL SPACING: 1" (25mm)
7/8" (19mm) DIA. OR SQUARE CONTROL SHAPE

CONSOLIDATE CONTROLS, INFORMATION DISPLAYS

35-54" (875-1372mm) ABOVE FLOOR

AVOID SIMULTANEOUS CONTROLS

AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE
SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

RECLINING SWIVEL SEATING FOR WIDER FIELD OF VIEW

FACE WORKSTATION TOWARD CO-WORKERS FOR FACE-TO-FACE COMMUNICATION

FLASHING VISUAL ALARM (freq. 5 Hz)
8000 Hz AUDITORY ALARM (120 db max.)

VISUAL WARNINGS WITHIN FIELD OF VIEW

EMERGENCY



DOOR CLOSER RESISTANCE
5-15 LB (22.2-66.7N)
pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED,
DOOR HANDLES SHOULD BE
U-SHAPED: 4" x 1.5" (102mm x 38mm)

DOORS

SIDE-HUNG PREFERRED TO SLIDING TYPE
60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLOOR

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID PATTERNS OR EXCESSIVE TEXTURES
FLOOR COVERING FIRMLY FIXED TO FLOOR

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
DIFFICULTY IN MOVING HEAD

AFFECTS APPROX. 1% OF U.S. POPULATION

DIFFICULTY IN MOVING HEAD

Persons with this limitation cannot easily look up, down, and/or to the side. Approximately 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Arthritis
- Cerebral Palsy
- Contractures due to Burns
- Muscular Dystrophy
- Neck Brace Wearers
- Parkinson's Disease
- Torticollis

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- BOOKSTANDS
- "FISHEYE" WINDOW INSERTS AND WALL MIRRORS
- TELEPHONE AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

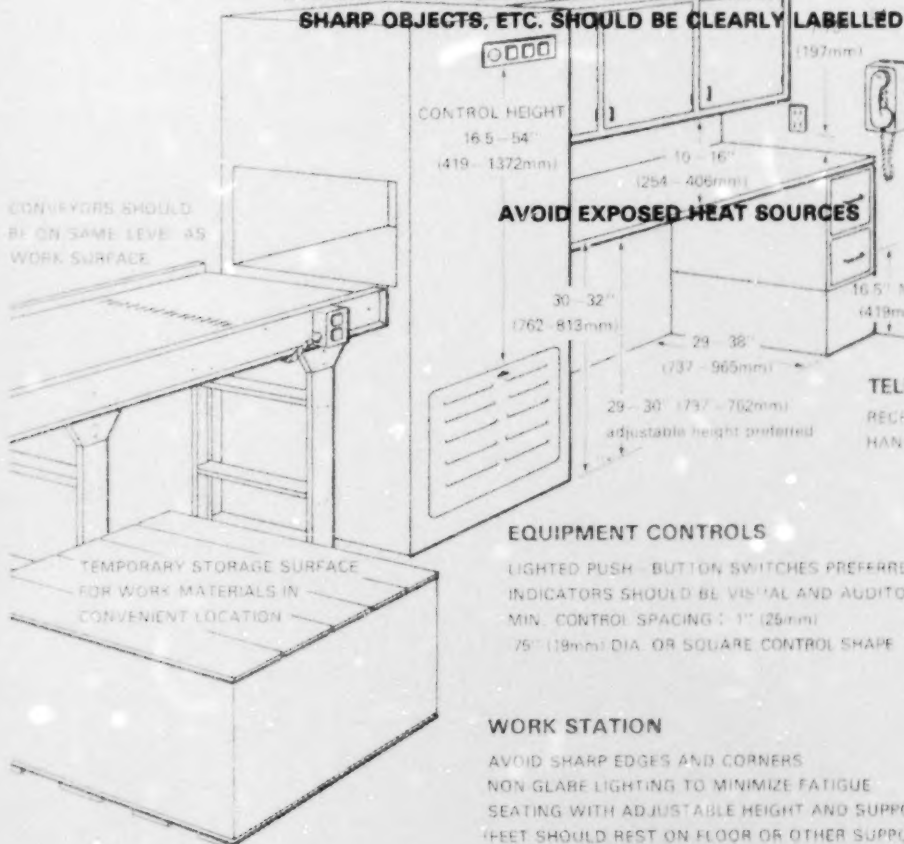
WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

STORAGE CABINETS

CABINET HEIGHT 63" MAX. (1600mm)
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND

STORAGE FOR HAZARDOUS MATERIALS AND SHARP OBJECTS, ETC. SHOULD BE CLEARLY LABELLED



INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

LIGHT ON/DARK PREFERRED
0.625 - 1" (16 - 25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLES

SIGN HEIGHT

65" (1676 - 1676mm)

PULL TYPE ALARM

36 - 48" (914 - 1219mm)

DIAL HEIGHT

48" (1219mm)

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN.

FLASHING VISUAL ALARM (less than 5 Hz)
8000 HZ AUDITORY ALARM (120 db max.)

EMERGENCY

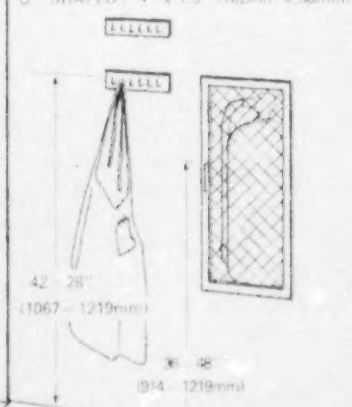


DOOR CLOSER RESISTANCE

5-15 LB (22.2 - 68 N)
pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED, DOOR HANDLES SHOULD BE

U-SHAPED: 4" x 1.5" (102mm x 38mm)



DOORS

SIDE-HUNG PREFERRED TO SLIDING TYPE
60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID PATTERNS OR EXCESSIVE TEXTURES
FLOOR COVERING FIRMLY FIXED TO FLOOR

AVOID FLOOR OUTLETS, PHONE TERMINALS, OTHER PROJECTIONS

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
LIMITATION OF SENSATION
AFFECTS APPROX. 1% OF U.S. POPULATION

LIMITATION OF SENSATION

Persons with this limitation have impaired nerve reception (heat, touch, pain, pressure) in various parts of the body. Approximately 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Cerebrovascular Accidents (Stroke)
- Spinal Cord Injury
- Trauma

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

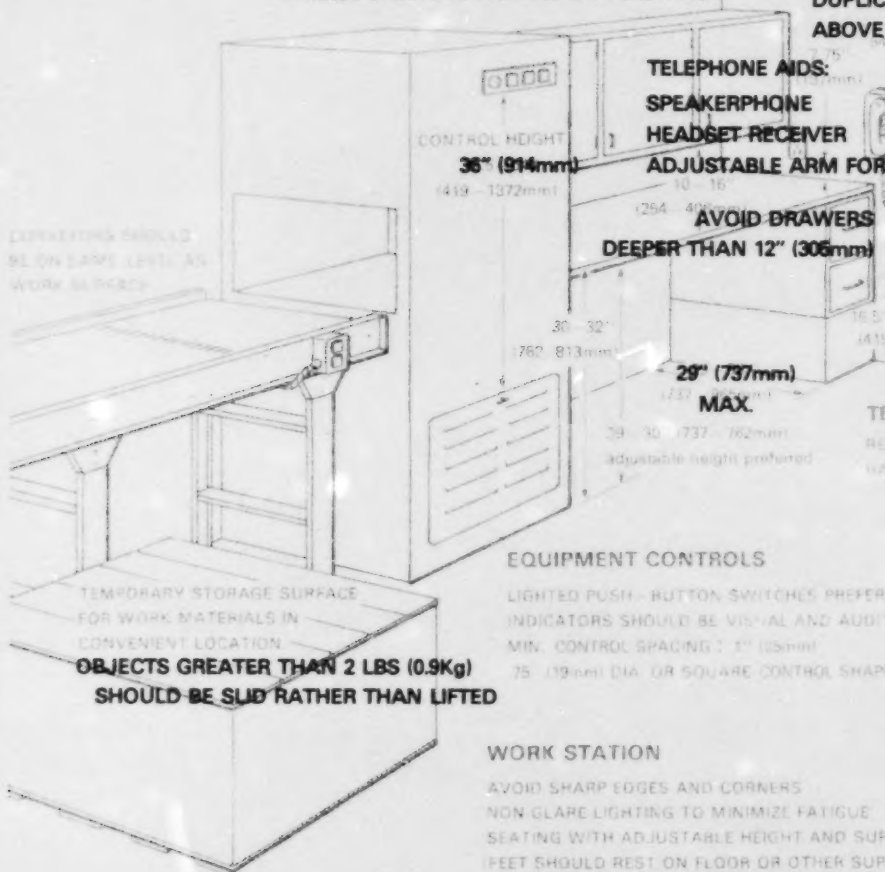
WALLS

USE SELF-RESISTANT NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

AVOID CABINETS WITH DOORS THAT HINGE UP OR DOWN

STORAGE CABINETS

CABINET HEIGHT 83" MAX. (1600mm)
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND



**OBJECTS GREATER THAN 2 LBS (0.9Kg)
SHOULD BE SLID RATHER THAN LIFTED**

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

LIGHT-ON/DARK-PREFERRED
0.625-1" (16-25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (0.76mm)
MAY BE ACCOMPANIED BY BRAILLE

**DUPLICATE TACTILE SIGNAGE 30" (762mm)
ABOVE FLOOR IF NEEDED**

**TELEPHONE AIDS:
SPEAKERPHONE
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER**

**AVOID DRAWERS
DEEPER THAN 12" (305mm)**

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN.

EQUIPMENT CONTROLS

LIGHTED PUSH-BUTTON SWITCHES PREFERRED
INDICATORS SHOULD BE VISUAL AND AUDITORY
MIN. CONTROL SPACING: 1" (25mm)
75 (19mm) DIA. OR SQUARE CONTROL SHAPE

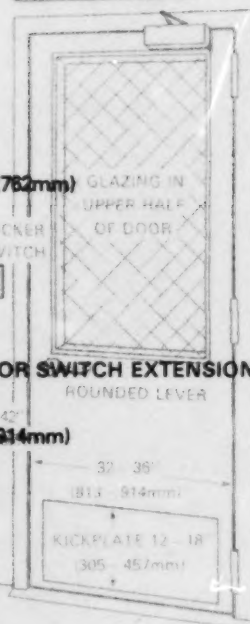
WORK STATION

AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE
SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
(FEET SHOULD REST ON FLOOR OR OTHER SUPPORT)

ARRANGE MATERIALS WITHIN 18" (457mm) REACH IF POSSIBLE

FLASHING VISUAL ALARM (less than 5 Hz)
8000 Hz AUDITORY ALARM (120 dB max)

EMERGENCY



**DOOR CLOSER RESISTANCE:
2 LB (8.9 N) MAX.**

(pref. adjustable or automatic)

IF EXTINGUISHERS MUST BE RECESSED
DOOR HANDLES SHOULD BE
U-SHAPED: 4" x 1.5" (102mm x 38mm)

DOORS

SIDE-HUNG PREFERRED TO SLIDING TYPE
60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID PATTERNS OR EXCESSIVE TEXTURES
FLOOR COVERING FIRMLY FIXED TO FLOOR

MECHANICAL READERS CAN AID IN OPERATION OF DOORS, FILES, WINDOWS, OTHER CONTROLS, AS WELL AS IN ACCESS TO MATERIALS

WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS

DIFFICULTY IN LIFTING AND REACHING WITH ARMS

AFFECTS APPROX. 6% OF U.S. POPULATION

DIFFICULTY IN LIFTING AND REACHING WITH ARMS

Persons with this limitation experience decreased mobility, range of motion, and/or strength in their upper extremities. Approximately 6% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Cardiac Conditions
- Cerebral Palsy
- Congenital Deformities
- Multiple Sclerosis
- Muscular Dystrophy
- Spinal Cord Injury

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- LIGHT SWITCH EXTENSIONS
- MECHANICAL "REACHERS"
- OPEN DESK-TOP FILES AND STORAGE
- TYPEWRITERS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

AVOID LATCHES ON STORAGE CABINETS

**PEN/PENCIL THROUGH
OR HARD FOAM**

TOOL STANDS/HOLDERS

EQUIPMENT CONTROLS

**OBJECTS SHOULD BE SLID
THAN LIFTED**

**PUSH—BUTTON OR ROCKER TYPE
OPTIMUM OPERATING FORCE: 3/4
AVOID NEED FOR ROTATING MOT
AVOID SLICK, UNTEXTURED CONT**

USE BOLTS, CLAMPS, OR NON-SLIP MATS WHERE STABILIZATION IS REQUIRED. SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH WILL BE ABLE TO PROTECT AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

AFFECTS APPROX. 1% OF U.S. POPULATION

6'6" HEIGHT
1377-1476-91 HOCKEY
SWITCH

TOOL STANDS/HOLDERS MAKE GRASP EASIER

OPTIMUM OPERATING FORCE: 3/4 LB (3.2 N)

AVOID SLICK, UNTEXTURED CONTROL SURFACES

USE BOLTS, CLAMPS, OR NON-SLIP MATS WHERE STABILITY IS NEEDED

USE BOLTS, CLAMPS, OR NON-SLIP MATS WHERE STABILITY IS NEEDED

RECEIVER

GLASS IN UPPER HALF OF DOOR

ROUNDED LENS

KIDNAPATE 12-18
205-457mm

127

DIFFICULTY IN HANDLING AND FINGERING

Persons with this limitation experience decreased mobility, range of motion, and/or strength in their hands. Approximately 1% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Amputations	Muscular Dystrophy
Arthritis	Myasthenia Gravis
Bilateral Hemiparetic	Parkinson's Disease
Cardiac Disorders	Polymyositis
Cerebral Palsy	Severe Burns
Cerebrovascular Accidents (Stroke)	Spinal Cord Injury
Congenital Deformities	Syringomyelia
Dupuytren's Contracture	
Multiple Sclerosis	

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BOOKSTANDS	READING MACHINES
CASSETTE TAPE RECORDERS	TELEPHONE AIDS
MICROFILM VIEWERS	TYPEWRITERS
NON-SLIP MATS	TYPEWRITER KEYGUARDS, PAPER ROLLS
OPEN DESK-TOP FILES AND STORAGE	

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

USE SLIP-RESISTANT NON-GLARE SURFACES
AVOID ROUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL GROUND ABSORPTION

STORAGE CABINETS

CABINET HEIGHT 63" MAX (1600mm)
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND

INTERIOR SIGNS

LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

LIGHT ON DARK PREFERRED
0.675-1 (16-25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE

FLASHING VISUAL ALARM (less than 5 Hz)
8000 HZ AUDITORY ALARM (120 dB max)

EMERGENCY

DOOR CLOSER RESISTANCE
5-15 LB (2.2-6.7N)
pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED,
DOOR HANDLES SHOULD BE
U-SHAPED: 4" x 1.5" (102mm x 38mm)

CONVEYORS SHOULD
BE ON SAME LEVEL AS
WORK SURFACE

TEMPORARY STORAGE SURFACE
FOR WORK MATERIALS IN
CONVENIENT LOCATION

CONTROL HEIGHT
16.5-54"
(419-1372mm)

10-16"
(254-406mm)

30-32"
(762-813mm)

29-38"
(737-965mm)

28-30" (737-762mm)
adjustable height preferred

EQUIPMENT CONTROLS

USE PUSH-BUTTON OR ROCKER TYPE
AVOID SLICK, UNTEXTURED SURFACES
MIN. CONTROL SPACING: 1" (25mm)
75" (19mm) DIA. OR SQUARE CONTROL SHAPE

WORK STATION

AVOID SHARP EDGES AND CORNERS
NON-GLARE LIGHTING TO MINIMIZE FATIGUE

WORKSURFACE SHOULD BE RAISED OR LOWERED FOR WORKING WITH FEET OR MOUTHSTICK
USE SLICK SURFACES FOR EASIER MOVEMENT OF MATERIALS

TELEPHONE AIDS:
SPEAKERPHONE
HEADSET RECEIVER
ADJUSTABLE ARM FOR RECEIVER

DIAL HEIGHT
48"
(1219mm)

TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN

SIGN HEIGHT

54-66" (1372-1676mm)

ROCKER
SWITCH

GLAZING IN
UPPER HALF
OF DOOR
ROUNDED LEVER

36-42"
(914-1067mm)

32-36"
(813-914mm)

KICKPLATE 12-18"
(305-457mm)

42-28"
(1067-1219mm)

36-18"
(914-1219mm)

DOORS

SIDE-HUNG PREFERRED TO SLIDING TYPE
60" (1524mm) CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX THRESHOLD

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
FLOOR COVERING FIRMLY FIXED TO FLOOR

PERSONS WITH THIS LIMITATION MAY COMPENSATE THROUGH USE OF A MOUTHSTICK, THEIR FEET, OR ELECTRO-MECHANICAL AIDS
ENVIRONMENTAL CONTROL SYSTEMS ARE AVAILABLE FOR OPERATION OF TELEPHONE, DOOR, LIGHTING, OR OTHER ELECTRICAL APPLIANCES
WILL BE AIDABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
INABILITY TO USE UPPER EXTREMITIES
AFFECTS APPROX. 2% OF U.S. POPULATION

WORKSITE 2

INABILITY TO USE UPPER EXTREMITIES

Persons with this limitation experience complete paralysis, severe incoordination, or loss of upper extremities. Approximately 2% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Amputations
- Arthritis
- Cerebral Palsy
- Congenital Deformities
- Polio
- Spinal Cord Injury

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

- BOOKSTANDS
- CASSETTE TAPE RECORDERS
- DOOR OPENERS
- ENVIRONMENTAL CONTROLS
- MICROFILM VIEWERS

- OPEN DESK-TOP FILES AND STORAGE
- READING MACHINES
- SOUND-OPERATED AND OTHER REMOTE SWITCHES
- TELEPHONE AIDS
- TYPEWRITERS
- TYPEWRITER KEYGUARDS, PAPER ROLLS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALLS

WORKSITE SHOULD BE DESIGNED TO MINIMIZE
STRETCHING, BENDING AND TWISTING OF THE
BODY.

STORAGE CABINETS

DO NOT MOUNT AT MORE THAN 6'6" (1981mm)
HEIGHT. HANDLES SHOULD BE LOCATED AT
LEAST 4" (102mm) ABOVE WORK SURFACE.
ARTICLES SHOULD BE OBTAINABLE WITH ONE HAND.

INTERIOR SIGNS

LOCATE NEAR ENTRY POINTS. PROVIDE CONTRAST
LABELS. USEABLE TEXT. FONT SIZE 1/4" (6.35mm).

LETTERING

DO NOT USE ALL-CAPS. USE SERIF FONT.
HEIGHT 1/4" (6.35mm). SPACING 1/8" (3.18mm).
BOLD TYPE. 1/4" (6.35mm).
(MAY BE ALONG RATHER THAN BOLD).

EMERGENCY



DOOR CLOSER WITH STROKE
ADJUSTMENT. 1/2" (12.7mm) STROKE.
DOOR CLOSER WITH STROKE
ADJUSTMENT.

IF EXIT SIGNS MUST BE RECESSED,
DOOR HANDLES SHOULD BE
4" (102mm) x 1/2" (12.7mm) x 1/2" (12.7mm).



TELEPHONES

RECEIVER WITH VOLUME CONTROL.
HANDSET CORD 36" (914mm) MIN.

EQUIPMENT CONTROLS

LIGHTER PUSH-BUTTON SWITCHES PREFERRED.
INDICATORS SHOULD BE VISUAL AND AUDIBLE.
MIN. CONTROL SPACING 1/2" (12.7mm).
DO NOT USE 1/4" (6.35mm) OR SMALLER CONTROL SPACING.

WORK STATION

MINIMIZE NEED FOR REACHING UP OR BENDING DOWN.
DO NOT CLIMB. WORKING TO MINIMIZE FATIGUE.

SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK.
FEET SHOULD REST ON FLOOR OR OTHER SUPPORT.

SEATING WITH FULL ARMS AND BACKREST, STABLE BASE.
SEAT BELTS AND/OR CUSHIONS FOR ADDED STABILITY.

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS.
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE.
AVOID PATTERNS OR EXCESSIVE TEXTURES.
FLOOR COVERING FIRMLY FIXED TO FLOOR.

BULKY OBJECTS SHOULD BE
SLID RATHER THAN LIFTED

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL BE AVAILABLE, BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
DIFFICULTY IN SITTING AFFECTS APPROX. 5% OF U.S. POPULATION. ADDITIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

WORKSITE 2

DIFFICULTY IN SITTING

Persons with this limitation experience lack of strength, restriction of motion, and/or lack of trunk control in bending, turning, or balance. Approximately 5% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

- Arthritis of the Spine or Hips
- Congenital Deformities
- Scoliosis/Kyphosis/Lordosis
- Spinal Cord Injury

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

WALKERS

WALKERS SHOULD BE USED TO ACCESS WORKSITES
WALKERS SHOULD BE USED TO ACCESS WORKSITES
WALKERS SHOULD BE USED TO ACCESS WORKSITES

STORAGE CABINETS

CABINET HEIGHT 84" MAX. (2134mm)
U. TRAVEL HANDLES 1" x 1/2" x 1/2" (25mm x 12mm x 12mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND

INTERIOR SIGNS

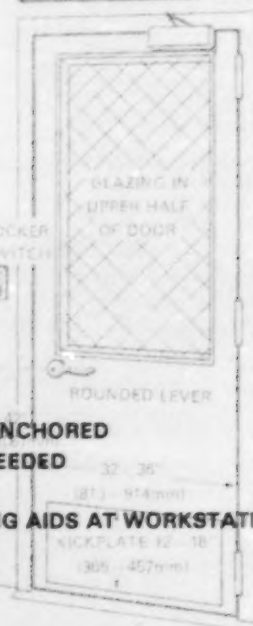
LOCATE REAR DOOR FRAME ON LEFT SIDE
LABEL LABLE (EIGHT) WITH SYMBOL

LETTERING

LIGHT ON - DARK BACKGROUND
WORDS 1" x 1/2" (25mm x 12mm) TYPE TALL CAPS
RAISED 1/8" (3mm)
WALL BE ACCOMPANIED BY BRAILLE

FLASHING VISUAL ALARM (EIGHT) WITH 8 Hz
80% OF AUDITORY ALARM (EIGHT) WITH 8 Hz

EMERGENCY



DOOR CLOSER RESISTANCE
5 LB (22.2 - 61 N)
pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED,
DOOR HANDLES SHOULD BE
U. SHAPED 1" x 1/2" (25mm x 12mm)

ILLUSTRATION

ILLUSTRATION

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ILLUSTRATION

BAR OR HANDLE ASSISTS FIRMLY ANCHORED
WHEREVER ADDED SUPPORT IS NEEDED

PROVIDE CONVENIENT STORAGE FOR WALKING AIDS AT WORKSTATION

TELEPHONES

RECEIVER WITH FOLLOW CONTROL
UNUSUAL CORD 30" (762mm) MIN

DOORS

SIDE - (HUNG PREFERRED TO SLIDING) TYPE
80" (2032mm) CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (12mm) MAX. THRESHOLD

SHOULDER BAG, CRUTCH BAG,
OR OTHER AID FOR CARRYING MATERIALS

AVOID NEED FOR CARRYING HEAVY
OBJECTS (INHIBITS POSTURE)

WORKSTATION CONTROLS

LIGHTED PUSH - BUTTON SWITCHES PREFERRED
INDICATORS SHOULD BE RED AND AUDITORY
MIX CONTROL SPACING 1" (25mm)
1/2" (12mm) DIA. OR SQUARE CONTROL SHAPE

AVOID CONTROLS REQUIRING BOTH HANDS

WORK STATION

AVOID SHARP EDGES AND CORNERS
NON-GLARE (DESIGNING TO MINIMIZE FATIGUE)
SEATING WITH ADJUSTABLE HEIGHT AND SUPPORT FOR LOWER BACK
FEET SHOULD REST ON FLOOR OR OTHER SUPPORT

SEATING WITH FULL ARMS AND BACKREST

(SWIVEL, CASTER BASE MAY AID SOME PERSONS) OR RISING-ASSIST CHAIR

NOTE: FLOORS

FOR PERSONS USING WHEELCHAIRS RATHER THAN WALKING AIDS,
NO FURTHER MODIFICATIONS ARE NECESSARY TO WORKSITE 2

AVOID PATTERNS OR EXCESSIVE FEATURES
FLOOR COVERING FIRMLY FIXED TO FLOOR

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
ARE USABLE, MODIFIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.

DIFFICULTY IN USING LOWER EXTREMITIES

AFFECTS APPROX. 4% OF U.S. POPULATION

138

71

WORKSITE 2

139

DIFFICULTY IN USING LOWER EXTREMITIES

Persons with this limitation experience slowness of gait, impairment of kneeling, rising, walking, standing, and/or stair-climbing. Approximately 4% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Arthritis	Parkinson's Disease
Cancer	Spina Bifida
Cardiac Disorders	Spinal Cord Injury
Cerebral Palsy	
Cerebrovascular Accidents (Stroke)	
Congenital Deformities	
Hemophilia	
Multiple Sclerosis	
Muscular Dystrophy	

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BAR OR HANDLE ASSISTS
 CANE/CRUTCH STORAGE CLIPS
 RISING-ASSIST CHAIRS
 WHEELED CARTS, SHOULDER BAGS, CARRYING AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

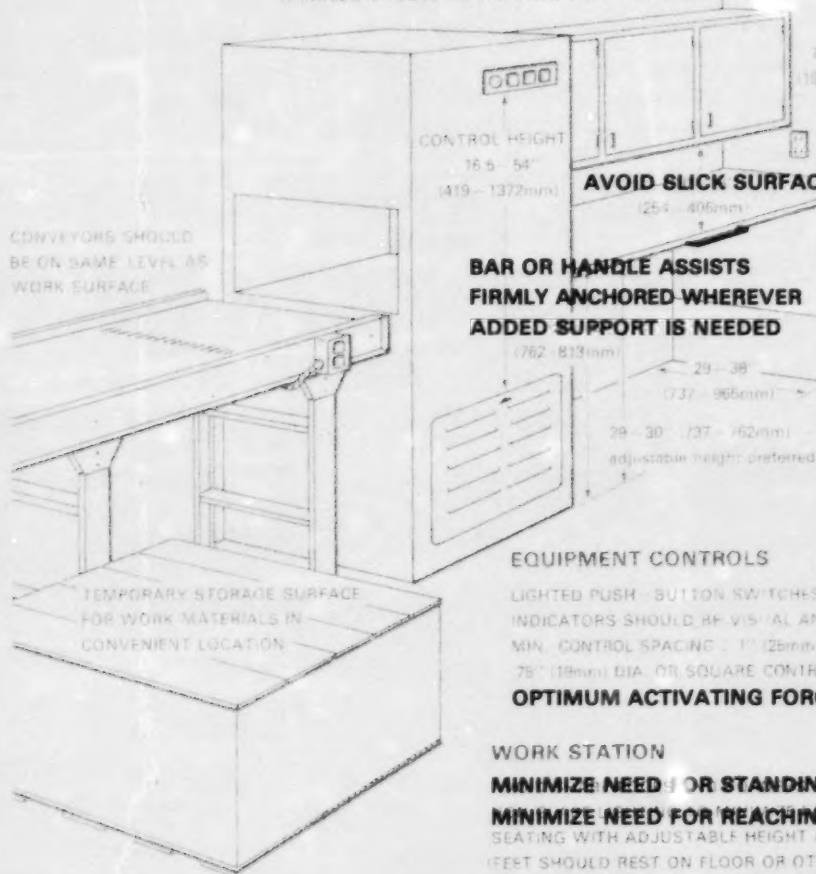
WALLS

USE SLIP-RESISTANT, NON-GLARE SURFACES
AVOID RUUGH SURFACES AND PROTRUDING OBJECTS
AVOID TOTAL SOUND ABSORPTION

STORAGE CABINETS

CABINET HEIGHT 60" MAX (1524mm)
U-SHAPED HANDLES: 4" x 1.5" (102mm x 38mm)
HANDLES SHOULD BE OPERABLE WITH ONE HAND

CONVEYORS SHOULD
BE ON SAME LEVEL AS
WORK SURFACE



INTERIOR SIGNS

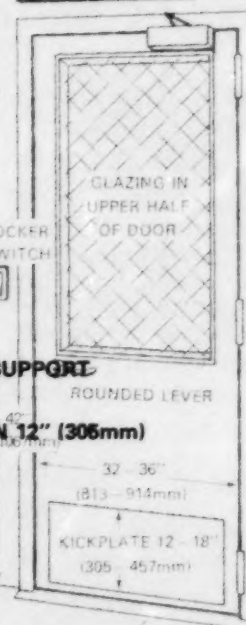
LOCATE NEAR DOOR FRAME ON LATCH SIDE
LABEL USABLE FACILITIES WITH ♿ SYMBOL

LETTERING

LIGHT ON - DARK PREFERRED
0.625 - 1" (16 - 25mm) HELVETICA TYPE (ALL CAPS)
RAISED 0.03" (1mm)
MAY BE ACCOMPANIED BY BRAILLE

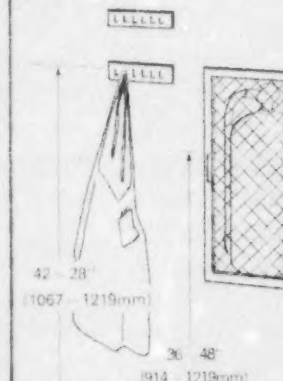
FLASHING VISUAL ALARM (less than 5 Hz)
8000 Hz AUDITORY ALARM (120 dB max.)

EMERGENCY



DOOR CLOSER RESISTANCE
5.15 LB (22.7 - 65.7N)
pref. adjustable or automatic

IF EXTINGUISHERS MUST BE RECESSED,
DOOR HANDLES SHOULD BE
U-SHAPED: 4" x 1.5" (102mm x 38mm)



TELEPHONES

RECEIVER WITH VOLUME CONTROL
HANDSET CORD 36" (914mm) MIN

DOORS

60" (1524mm)
SIDE-HUNG PREFERRED TO SLIDING TYPE
CLEAR SPACE ON BOTH SIDES OF DOOR
DOOR SHOULD OPEN INTO LOWER TRAFFIC AREA
GLASS SHOULD HAVE DECALS AT FACE HEIGHT
0.5" (13mm) MAX. THRESHOLD

FLOORS

NON-ABSORBENT MATERIALS IN WARM, DARK COLORS
AVOID COLOR CONTRAST EXCEPT TO DENOTE LEVEL CHANGE
AVOID PATTERNS OR EXCESSIVE TEXTURES
FLOOR COVERING FIRMLY FIXED TO FLOOR
ALLOW AMPLE, UNCLUTTERED AISLE SPACE

SPECIFICATIONS ON THIS ILLUSTRATION SUGGEST IMPROVEMENTS TO WORKSITES WHICH
WILL AID ABLE-BODIED AS WELL AS PERSONS WITH SENSORY OR LOWER EXTREMITY LIMITATIONS.
POOR BALANCE AFFECTS APPROX. 2% OF U.S. POPULATION
SPECIFIC FUNCTIONAL LIMITATIONS ARE DESCRIBED ON TRANSPARENT OVERLAYS.

POOR BALANCE

Persons with this limitation find it difficult or impossible to maintain balance when moving or when stationary (standing, walking, rising, stair climbing). Approximately 2% of the U.S. population is affected to some degree (National Academy of Sciences, 1976).

This limitation may be experienced by persons having any of the following disabilities:

Amputations

Spinal Cord Injury

Ataxia

Cerebral Palsy

Cerebrovascular Accidents (Stroke)

Deafness

Dystonia Musculorum Deformans

Multiple Sclerosis

Muscular Dystrophy

Parkinson's Disease

Aids suggested on the illustration below have been used by persons having this limitation. No endorsement of specific products is intended. The reader is encouraged to obtain further information from suppliers listed in the appendix under the following product headings:

BAR OR HANDLE ASSISTS

WHEELED CARTS, SHOULDER BAGS, CARRYING AIDS

Further modifications to WORKSITE 1 for persons having this limitation are suggested on the illustration. Each one should be selected, amended, or rejected according to the expressed needs of the individual and the job.

PRODUCT SUPPLIER INFORMATION

SPECIFIC PRODUCT INFORMATION CONCERNING AIDS AND DEVICES MENTIONED IN THIS RESOURCE CAN BE OBTAINED FROM THESE SUPPLIERS:

BAR OR HANDLE ASSISTS

Fred Sammons, Inc., Box 32, Brookfield, IL 60513
G.E. Miller, 484 S. Broadway, Yonkers, NY 10705
Lumex, Inc., 100 Spence St., Bay Shore, NY 11706
Tubular Specialties Manufacturing, Inc., 8119 South Beach St.,
P.O. Box 71527 Florence Branch, Los Angeles, CA 90001

BOOKSTANDS

Abbey Medical Equipment 800-421-1170
APARCO, Inc., 215 A Street, Boston, MA 02210
FashionAble, Rocky Hill, NJ 08553
Fred Sammons, Inc., Box 32, Brookfield, IL 60513
G.E. Miller, 484 S. Broadway, Yonkers, NY 10705
Maddak, Inc., Pequannock, NJ 07440

BRaille COMMUNICATION SYSTEMS

Elinfa, Inc., Suite 1114, 1725 "K" St., N.W., Washington, D.C. 20006

CANE/CRUTCH STORAGE CLIPS

Fred Sammons, Inc., Box 32, Brookfield, IL 60513
Maddak, Inc., Pequannock, NJ 07440

CASSETTE TAPE RECORDERS

Grundig 2050 Stenorette (uses only Grundig Cassettes),
GRUNDIG International, Ltd, Newlands Park, London SE26 5NQ
Panasonic RQ-212DAS Recorder, Matsushita Electric Corp. of America,
1 Panasonic Way, Secaucus, NJ 07094
Sony TC-205 Recorder, Sony Corp. of America, 9 West 57th St.,
New York, NY 10019

COMMUNICATION AIDS FOR NON-VERBAL PERSONS

Prentke Romich Co., RD2, Box 191, Shreve, Ohio 44676
Telesensory Systems, Inc., 3408 Hillview Ave., P.O. Box 10099,
Palo Alto, CA 94304
"VIP" and "Talking Pocket", Automated Data Systems, Inc.,
P.O. Box 4062, Madison, WI 53711
Zygo Industries, Inc., P.O. Box 1008, Portland, OR 97207

DOOR OPENERS

LCN Closers, Railroad Ave., Princeton, IL 61356
Overhead Door Corp., 6250 LBJ Freeway, Dallas, TX 75204
Power Access Corp., 96 Birch Ave., Little Silver, NJ 07739
Prentke Romich Co., RD 2, Box 191, Shreve, Ohio 44676
Securitron Magnalock Corp., P.O. Box 49875, Los Angeles, CA 90049
The Stanley Works, Farmington, CT 06032

ENVIRONMENTAL CONTROLS

BARD/CARBA, Div. of C.R. Bard, Inc., 731 Central Ave.,
Murray Hill, NJ 07974
Down East Manufacturing Co., 44 Bucknam Road, Falmouth, ME 04105
Fidelity Electronics, Ltd, 5245 Diversey Ave., Chicago, IL 60639
Maddak, Inc., Pequannock, NJ 07440
Possum, Inc., East Coast Division, P.O. Box 451, Midwood Station,
Brooklyn, NY 11230
Prentke Romich Co., RD2, Box 191, Shreve, Ohio 44676
Technical Aids to Independence, 12 Hyde Rd., Bloomfield, NJ 07003

"FISHEYE" WINDOW INSERTS AND WALL MIRRORS

Miles Kimball Co., 41 West 8th Ave., Oshkosh, WI 54901
"Lensor" #40740, The Gallery, Wallins Corners Road,
Amsterdam, NY 12010
The Highsmith Co., Inc., P.O. Box 25, Highway 106 East,
Fort Atkinson, WI 53538

ILLUMINATED MAGNIFIERS

Atlantic Office Supply Co., Inc., 4907 Annapolis Road,
Bladensburg, MD 20710
Luxo Lamp Corp., Purdy Ave., Port Chester, NY 10573
Vision Systems Division, The EdnaLite Corp., Ande Building,
Peekskill, NY 10566

LEVER DOOR HANDLES

Schlage Locks, 2401 Bayshore Blvd., San Francisco, CA 94119

LIGHT SWITCH EXTENSIONS

Fred Sammons, Inc., Box 32, Brookfield, IL 60513
Maddak, Inc., Pequannock, NJ 07440

MECHANICAL "REACHERS"

FashionAble, Rocky Hill, NJ 08553
Fred Sammons, Inc., Box 32, Brookfield, IL 60513
G.E. Miller, 484 S. Broadway, Yonkers, NY 10705
Maddak, Inc., Pequannock, NJ 07440

MICROFILM VIEWERS

Devoke Co., 3788 Fabian Way, P.O. Box 10011, Palo Alto, CA 94303
NCR, 365 South Oak, West Salem, WI 53405
The Dietzgen Corp., 250 West Willie Road, Des Plaines, IL 60016

NON-SLIP MATS

"Dycem", Fred Sammons, Inc., Box 32, Brookfield, IL 60513
"Vikem", Maddak, Inc., Pequannock, NJ 07440

ONE-HAND TYPEWRITERS

Typewriting Institute for the Handicapped, 3102 West Augusta Ave.,
Phoenix, AZ 85021

OPEN DESK-TOP FILES AND STORAGE

Atlantic Office Supply, Inc., 4907 Annapolis Road,
Bladensburg, MD 20710
The Highsmith Co., Inc., P.O. Box 25, Highway 106 East,
Fort Atkinson, WI 53538
Wilson-Jones, 6150 W. Touhy Ave., Chicago, IL 60648

READING MACHINES

The Ealing Corp., 22 Pleasant St., South Natick, MA 01760

RISING-ASSIST CHAIR

Economy Easy-Lift Chair, American Stair-Glide Corp.,
4001 East 138th St., Grandview, MO 64030
Vela Catapult Seat #S-1560, Maddak, Inc., Pequannock, NJ 07440
Levo Stand-Up Wheelchair, American Stair-Glide Corp., 4001 E.
138th St., Grandview, MO 64030

SENSORY PENS

Mechstat, Inc., 830 N.E. Loop 410, Suite 210, San Antonio, TX 78209
Raised Line Drawing Kit, American Foundation for the Blind,
15 West 16th St., NYC, NY 10011

SOUND-OPERATED AND OTHER REMOTE SWITCHES

Lewis & Conger, 39-25 Skillman Ave., Long Island, NY 11104
Markline, P.O. Box 1750S, Waltham, MA 02154
Vibralite Products, Inc., 83 S. Highland Ave., Ossining, NY 10562

SPEECH COMPRESSOR/RECORDERS

A-7 Speech Controller, Variable Speech Control Corp., 185 Berry
St., San Francisco, CA 94107
Lexicon Varispeech II, Lexicon, Inc., 60 Turner St.,
Waltham, MA 02154
Superscope C-104 Portable Cassette Recorder, Superscope, Inc.,
20525 Nordhoff St., Chatsworth, CA 91311

SPEECH SYNTHESIZERS, COMMUNICATORS

Phonic Mirror Handi Voice, HC Electronics, Inc., 250 Camino Alto,
Mill Valley, CA 94941
Canon Communicator, Telesensory Systems, Inc., 3408 Hillview Ave.,
P.O. Box 10099, Palo Alto, CA 94304

TABLES/HEIGHT-ADJUSTABLE

Fleetwood, 25 E. Washington Street, Zeeland, MI 49464
Intimus Designs, 8410 E. Roosevelt, Scottsdale, AZ 85257
Rudd International Corp., 1066 31st St. NW, Washington, D.C. 20001

"TALKING" CALCULATOR

"Speech Plus", Telesensory Systems, Inc., 1889 Page Mill Road,
Palo Alto, CA 94304

TELEPHONE AIDS

local Bell System representatives
Fred Sammons, Inc., Box 32, Brookfield, IL 60513
Lewis & Conger, 39-25 Skillman Ave., Long Island, NY 11104
Maddak, Inc., Pequannock, NJ 07440
Markline, P.O. Box 1750S, Waltham, MA 02154

TELEPHONE AIDS FOR NON-VERBAL PERSONS (TTY)

Micon MCM, Micon Industries, 252 Oak St., Oakland, CA 94607
Porta-tel, Specialized Systems, Inc., 215 South Highway 101,
Suite 203, Solana Beach, CA 92075

TYPEWRITER KEYGUARDS, PAPER ROLLS

Fred Sammons, Inc., Box 32, Brookfield, IL 60513
IBM Office Products Division, One Gateway Center Plaza,
Newton Corner, MA (or local IBM representative)
Olympia USA, Inc., Rt. 22, Somerville, NJ 08876

TYPEWRITERS

IBM Correcting Selectric II, IBM Office Products Division, One
Gateway Center Plaza, Newton Corner, MA
Olympia USA, Inc., Rt. 22, Somerville, NJ 08876
Smith-Corona Sterling Electric 12, SCM, Consumer Products Division,
299 Park Ave., NY, NY 10017

VIDEO READING AIDS

Apollo Lasers, Inc., 6357 Arizona Circle, Los Angeles, CA 90045
Visualtek, 1610 26th Street, Santa Monica, CA 90404

WHEELED CARTS, SHOULDER BAGS, CARRYING AIDS

Atlantic Office Supply Co., Inc., 4907 Annapolis Road,
Bladensburg, MD 20710
Chesley Industries, Inc., 20775 Chesley Dr., Farmington, MI 48024
FashionAble, Rocky Hill, NJ 08553
G.E. Miller, 484 S. Broadway, Yonkers, NY 10705
Global Equipment Co., 6556 Hemlock Drive, Hempstead, NY 11550
Maddak, Inc., Pequannock, NJ 07440

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